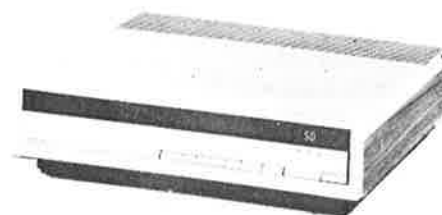




# SelectaVision® VideoDisc System Basic Service Data

**RCA Corporation**  
**Consumer Electronics**  
**Technical Publications**  
P.O. Box 1976 | Indianapolis, Indiana 46206

## Model SJT 100/ 101/200/300



SJT 200

**RCA Inc.**  
**Technical Publications**  
5575 Royalmount Avenue | Town of Mount-Royal | Quebec, Canada H4P 1J8  
**Canada Stock Numbers:**  
Add prefix 62 to all stock numbers.

**TO AVOID ERROR** file all supplements and addendums as soon as received. Consult these before ordering parts.

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**CAUTION:** DO NOT USE MONAURAL ALIGNMENT (TEST) DISC STK. NO.  
149235 WITH MODELS COVERED BY THIS SERVICE DATA.

**NOTE:** MODEL SJT 101 IS ELECTRONICALLY AND MECHANICALLY THE SAME AS MODEL SJT 100.

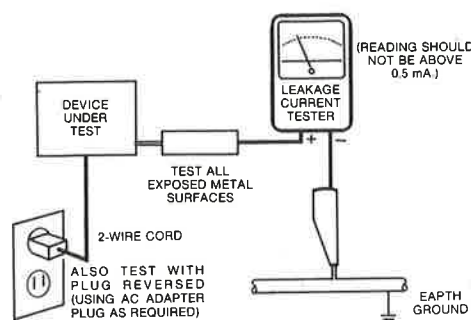
### SAFETY NOTICE

Components having special safety characteristics are identified by shading on schematics and by \* stars on the parts list in this Service Data and its supplements and bulletins. Before servicing this instrument, it is important that the service technician read and follow the "Safety Precautions" and "Product Safety Notices" in this Service Data.

## SAFETY PRECAUTIONS

1. **Before returning the VideoDisc Player to the customer**, always make a safety check of the entire instrument, including, but not limited to, the following items:

- a. Be sure that no built-in protective devices are defective and/or have been defeated during servicing. (1) Protective shields are provided on this VideoDisc Player to protect both the technician and the customer. Correctly replace all missing protective shields, including any removed for servicing convenience. (2) When reassembling the VideoDisc Player, be sure to put back in place all protective devices, including, but not limited to, non-metallic control knobs, insulating fishpapers, adjustment and compartment covers/shields, and isolation resistor/capacitor networks. **Do not operate this instrument or permit it to be operated without all protective devices correctly installed and functioning. Servicers who defeat safety features or fail to perform safety checks may be liable for any resulting damage.**
- b. Be sure that there are no cabinet openings through which an adult or child might be able to insert their fingers and contact a hazardous voltage. Such openings include, but are not limited to, (1) excessively wide cabinet ventilation slots, and (2) improperly fitted and/or incorrectly secured cabinet covers.
- c. **Leakage Cold Check** — With the VideoDisc Player AC plug removed from any AC source, connect an electrical jumper across the two AC plug prongs. Place the VideoDisc Player AC switch in the on position. Connect one lead of an ohmmeter to the AC plug prongs tied together and touch the other ohmmeter lead in turn to each push button/customer control, exposed metal screws, metalized overlays and to each cable connector. If the measured resistance is less than 1.0 megohm or greater than 5.2 megohm (except for the center conductor of the F connector that feeds the TV receiver which will measure open when the function switch is in the play position) an abnormality exists that must be corrected before the VideoDisc Player is returned to the customer. Repeat this test with the VideoDisc Player AC switch in the off position. All the preceding tests should be made with a Disc in the player and repeated without a Disc in the player.



AC Leakage Test

d. **Leakage Current Hot Checks**

On completely assembled instrument, with a Disc in the Player and all tests repeated without a Disc in the Player, plug the AC line cord directly into a 120V AC outlet. (Do not use an isolation transformer during this test.) Use a leakage current tester or a metering system that complies with American National Standards Institute (ANSI) C101.1 *Leakage Current for Appliances* and Underwriters Laboratories (UL) 1410, (50.7). Measure for current, with the

player in the *play* position and repeat with the player in the *Load—Unload* and *off* positions from a known earth ground (metal waterpipe, conduit, etc.) to all exposed metal or conductive parts of the instrument (antenna connections, handle bracket, metal cabinet, screwheads, metallic overlays, push-buttons, control shafts, etc.), especially any exposed metal parts that offer an electrical return path to the Player deck. Any current measured must not exceed 0.5 milliamp. Reverse the instrument power cord plug in the outlet and repeat test.

**ANY MEASUREMENTS NOT WITHIN THE LIMITS SPECIFIED HEREIN INDICATE A POTENTIAL SHOCK HAZARD THAT MUST BE ELIMINATED BEFORE RETURNING THE INSTRUMENT TO THE CUSTOMER OR BEFORE CONNECTING TO AN ANTENNA OR ACCESSORIES.**

e. **Interconnected Equipment AC Leakage Test**

Avoid shock hazards. The television instrument, accessory, or cable(s) to which this VideoDisc Player is connected should have the applicable sections of the leakage resistance cold check and the leakage current hot check performed. Do not connect this VideoDisc Player to a TV antenna, cable or accessory that exhibits excessive leakage currents.

2. Read and comply with all caution and safety-related notes on or inside the VideoDisc Player cabinet, and on the Player deck.
3. **Design Alteration Warning** — Do not alter or add to the mechanical or electrical design of this VideoDisc Player. Design alterations and additions, including, but not limited to, circuit modifications and the addition of items such as auxiliary audio and/or video output connections, cables and accessories etc. might alter the safety characteristics of this VideoDisc Player and create a hazard to the user. Any design alterations or additions may void the manufacturer's warranty and may make you, the servicer responsible for personal injury or property damage resulting therefrom.
4. Observe original lead dress. Take extra care to assure correct lead dress in the following areas: a. near sharp edges, b. near thermally hot parts — be sure that leads and components do not touch thermally hot parts in the AC and DC supplies. Always inspect in all areas for pinched, out-of-place, or frayed wiring. Do not change spacing between components, and between components and the printed-circuit board. Check AC power cord for damage.
5. Components, parts, and/or wiring that appear to have overheated or are otherwise damaged should be replaced with components, parts, or wiring that meet original specifications. Additionally, determine the cause of overheating and/or damage and, if necessary, take corrective action to remove any potential safety hazard.
6. **PRODUCT SAFETY NOTICE** — Many electrical and mechanical parts have special safety-related characteristics some of which are often not evident from visual inspection, nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified in RCA service data by *shading* on schematics and by a (\*) in the parts list. Use of a substitute replacement that does not have the same safety characteristics as the recommended replacement part in RCA service data parts list might create shock, fire, and/or other hazards. Product Safety is under review continuously and new instructions are issued whenever appropriate. For the latest information, always consult the appropriate current RCA service literature. A subscription to, or additional copies of, RCA service literature may be obtained at a nominal charge from your RCA Consumer Electronics Distributor or from RCA Technical Publications, P.O. Box 1976, Indianapolis, IN 46206, or Canadian residents may order from RCA Inc., Technical Publications, 5575 Royalmount Ave., Town of Mount-Royal, Quebec H4P 1J8 Canada.

## SERVICING PRECAUTIONS

**CAUTION:** Before servicing instruments covered by this service data and its supplements and addendums, read and follow the **SAFETY PRECAUTIONS** on page 2 of this publication. **NOTE:** If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions on page 2 of this publication, always follow the safety precautions. **Remember: Safety First.**

## General Servicing Precautions

1. Always unplug the instrument AC power cord from the AC power source before:
  - a. Removing or reinstalling any component, circuit board, module, or any other instrument assembly.
  - b. Disconnecting or reconnecting any instrument electrical plug or other electrical connection.
  - c. Connecting a test substitute in parallel with an electrolytic capacitor in the instrument.

**Caution:** A wrong part substitute or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.

2. Do not spray chemical on or near this instrument or any of its assemblies.
3. Unless specified otherwise in this service data, clean electrical contacts by applying the following mixture to the contacts with a pipe cleaner, cotton-tipped stick or comparable nonabrasive applicator: 10% (by volume) Acetone and 90% (by volume) isopropyl alcohol (90% - 99% strength).

**Caution:** This is a flammable mixture.

Unless specified otherwise in this service data, lubrication of contacts is not required.

4. Do not defeat any plug/socket B+ voltage interlocks with which instruments covered by this service data might be equipped.
5. Do not apply AC power to this instrument and/or any of its electrical assemblies unless all solid-state device heat sinks are correctly installed.
6. Always connect the test instrument ground lead to the appropriate instrument chassis ground *before* connecting the test instrument positive lead. Always remove the test instrument ground lead *last*.

## Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called *Electrostatically Sensitive (ES) Devices*. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a *grounded-tip* soldering iron to solder or unsolder ES devices.

4. Use only an *anti-static* type solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material.)
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the instrument ground or circuit assembly into which the device will be installed. **CAUTION:** Be sure no power is applied to the instrument or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

## General Soldering Guidelines

1. Use a grounded-tip, low-wattage soldering iron and appropriate tip size and shape that will maintain tip temperature within the range 500°F to 600°F.
2. Use an appropriate gauge of RMA resin-core solder composed of 60 parts tin/40 parts lead.
3. Keep the soldering iron tip clean and well tinned.
4. Thoroughly clean the surfaces to be soldered. Use a small wire-bristle (0.5 inch, or 1.25 cm) brush with a metal handle. Do not use freon-propelled spray-on cleaners.
5. Use the following unsoldering technique:
  - a. Allow the soldering iron tip to reach normal temperature (500°F to 600°F).
  - b. Heat the component lead until the solder melts.
  - c. Quickly draw away the melted solder with an anti-static, suction-type solder removal device or with solder braid.

**CAUTION:** Work quickly to avoid overheating the circuit board printed foil.

6. Use the following soldering technique:
  - a. Allow the soldering iron tip to reach normal temperature (500°F to 600°F).
  - b. First, hold the soldering iron tip and solder strand against the component lead until the solder melts.
  - c. Quickly move the soldering iron tip to the junction of the component lead and the printed circuit foil, and hold it there only until the solder flows onto and around both the component lead and the foil.

**CAUTION:** Work quickly to avoid overheating the circuit board printed foil.

- d. Closely inspect the solder area and remove any excess or splashed solder with a small wire-bristle brush.

## IC Removal/Replacement

Use the following technique for IC removal and replacement.

## Removal

1. Desolder and draw away the melted solder with an anti-static suction-type solder removal device (or with solder braid) before removing the IC.



SERVICING PRECAUTIONS

Replacement

- 1. Carefully insert the replacement IC in the circuit board.
- 2. Carefully bend each IC lead against the circuit foil pad and solder it.
- 3. Clean the soldered areas with a small wire-bristle brush. (It is not necessary to reapply acrylic coating to the areas.)

"Small-Signal" Discrete Transistor Removal/Replacement

- 1. Remove the defective transistor by clipping its leads as close as possible to the component body.
- 2. Bend into a "U" shape the end of each of three leads remaining on the circuit board.
- 3. Bend into a "U" shape the replacement transistor leads.
- 4. Connect the replacement transistor leads to the corresponding leads extending from the circuit board and crimp the "U" with long nose pliers to insure metal to metal contact, then solder each connection.

Power Output Transistor Devices Removal/Replacement

- 1. Heat and remove all solder from around the transistor leads.
- 2. Remove the heatsink mounting screw (if so equipped).
- 3. Carefully remove the transistor from the circuit board.
- 4. Insert new transistor in circuit board.
- 5. Solder each transistor lead, and clip off excess lead.
- 6. Replace heatsink.

Diode Removal/Replacement

- 1. Remove defective diode by clipping its leads as close as possible to diode body.
- 2. Bend the two remaining leads perpendicularly to the circuit board.
- 3. Observing diode polarity, wrap each lead of the new diode around the corresponding lead on the circuit board.
- 4. Securely crimp each connection and solder it.
- 5. Inspect (on the circuit board copper side) the solder joints of the two "original" leads. If they are not shiny, reheat them and, if necessary, apply additional solder.

Fuse and Conventional Resistor Removal/Replacement

- 1. Clip each fuse or resistor lead at top of circuit board hollow stake.
- 2. Securely crimp leads of replacement component around notch at stake top.
- 3. Solder the connections.

**CAUTION:** Maintain original spacing between the replaced component and adjacent components and the circuit board, to prevent excessive component temperatures.

Circuit Board Foil Repair

Excessive heat applied to the copper foil of any printed circuit board will weaken the adhesive that bonds the foil to the circuit board, causing the foil to separate from, or "lift-off", the board. The following guidelines and procedures should be followed whenever this condition is encountered.

In Critical Copper Pattern Areas

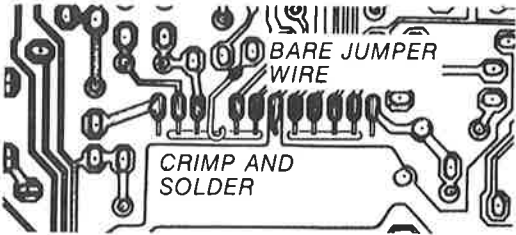
High component/copper pattern density and/or special voltage/current characteristics make the spacing and integrity of copper pattern in some circuit board areas more critical than in others. The circuit foil in these areas is designated as *Critical Copper Pattern* and is identified and illustrated in this service data in the section titled *Safety Related Copper Pattern* (see table of contents for page number). Because Critical Copper Pattern requires special soldering techniques to ensure the maintenance of reliability and safety standards, contact your local RCA Consumer

Electronics Distributor Service Manager before attempting repair of Critical Copper Pattern.

At IC Connections

To repair defective copper pattern at IC connections, use the following procedure to install a jumper wire on the copper pattern side of the circuit board. (Use this technique only on IC connections.)

- 1. Carefully remove the damaged copper pattern with a sharp knife. (Remove only as much copper as absolutely necessary.)
- 2. Carefully scratch away the solder resist and acrylic coating (if used) from the end of the remaining copper pattern.



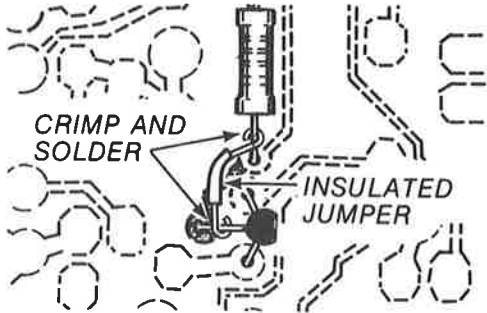
Install Jumper Wire and Solder

- 3. Bend a small "U" in one end of a small-gauge jumper wire and carefully crimp it around the IC pin. Solder the IC connection.
- 4. Route the jumper wire along the path of the cut-away copper pattern and let it overlap the previously scraped end of the good copper pattern. Solder the overlapped area, and clip off any excess jumper wire.

At Other Connections

Use the following techniques to repair defective copper pattern at connections other than IC Pins. This technique involves the installation of a jumper wire on the component side of the circuit board.

- 1. Remove the defective copper pattern with a sharp knife. Remove at least 1/4 inch of copper, to ensure that a hazardous condition will not exist if the jumper wire opens.
- 2. Trace along the copper pattern from both sides of the pattern break and locate the nearest component that is directly connected to the affected copper pattern.
- 3. Connect insulated 20-gauge jumper wire from the lead of the nearest component on one side of the pattern break to the lead of the nearest component on the other side. Carefully crimp and solder the connections.



Insulated Jumper Wire

**CAUTION:** Be sure the insulated jumper wire is dressed so that it does not touch components or sharp edges. F013.4.2

SPECIFICATIONS

- Power Input:** — 120 VOLTS, 50/60 Hz.  
**Power Consumption:** — SJT 100 — 25 WATTS  
                                  SJT 200 — 27 WATTS  
                                  SJT 300 — 28 WATTS  
**Antenna Impedance:** — 75 ohm in/out  
**RF Output Level:** — 3 mV Maximum  
                                  1 mV Minimum  
                                  Switchable to  
                                  Channel 3 or 4  
**Circuit Boards:** — PW 200 — RESONATOR  
                          PW 400 — Arm Preamp  
                          PW 600 — AC input  
                          PW 900 — Remote IR Preamp  
                          PW 1100 — Remote Amp  
                          PW 1700 — Display  
                          PW 5600 — Function Switch  
                          Assembly  
                          PW Hook up-Pickup Arm

- Interconnect  
PW Master — Master Circuit Board  
**Weight:** — Approx. 20 lbs.  
**Dimensions:** — WIDTH — 17" (431.8 mm)  
                          DEPTH — 16-1/2" (418.9 mm)  
                          HEIGHT: — 5" (126.7 mm)  
**Turntable Speed:** — 449.55 RPM Direct Drive  
                                  Quartz-Locked  
**Play Time:** — 2 hours (1 hour per disc side)  
**Video Signal System:** — EIA Standard NTSC Color  
                                  Signal  
**Video Output:** — 1V p-p into 75-ohm termination 2V p-p  
                                  unterminated  
**Audio Output:** — 2 channel 200 mV ± 20 mV RMS, into  
                                  10K ohm or greater impedance  
**Disc Play System:** — CED Capacitance  
                                  Electronic Disc

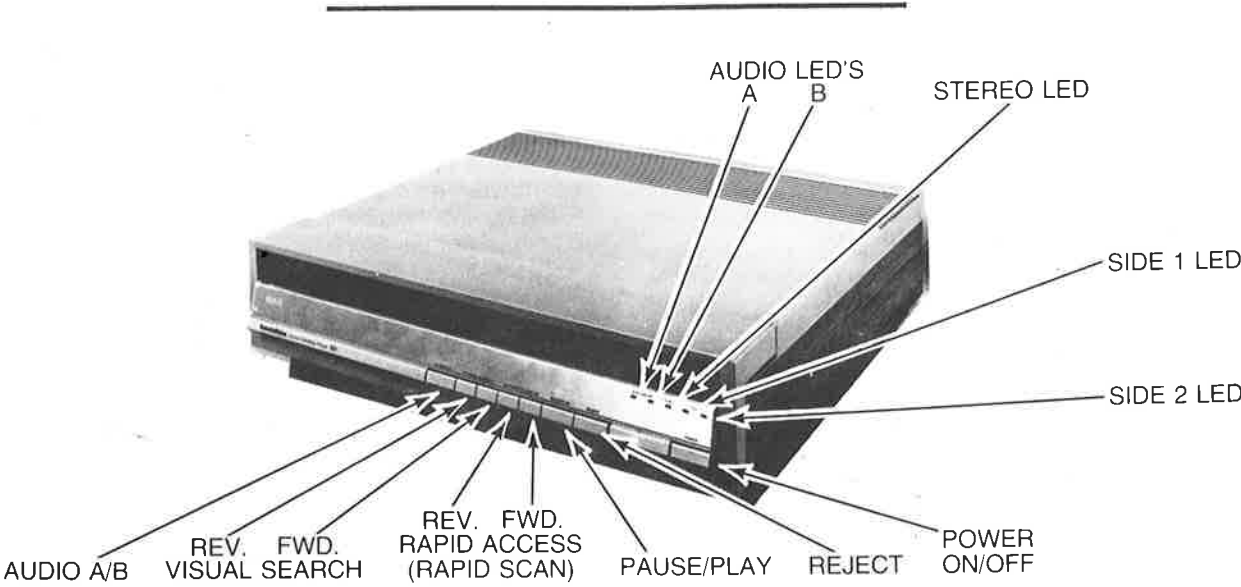


Fig. 1—SJT 200 Operating Controls

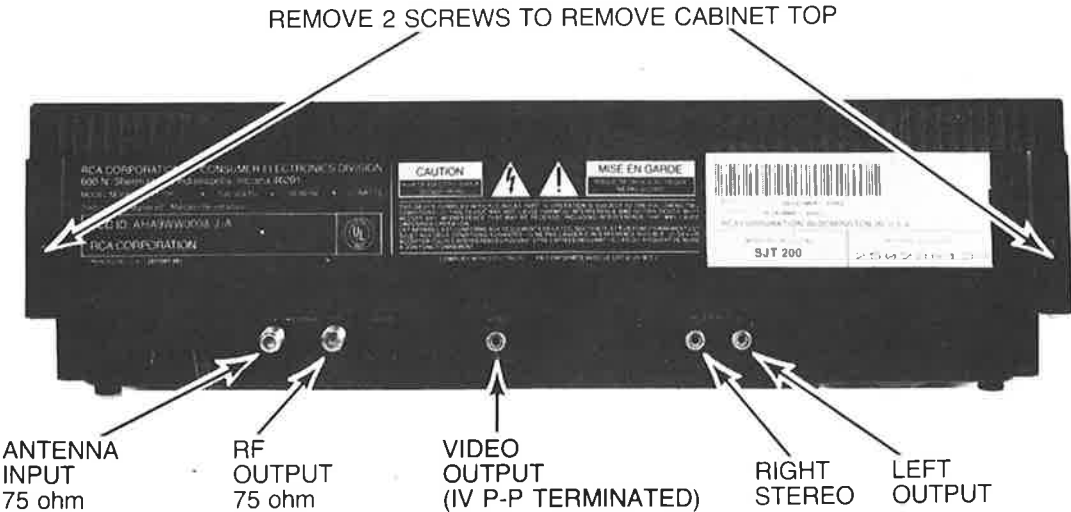


Fig. 2—SJT 200 Rear Panel Connections

## OPERATING CONTROLS AND FUNCTIONS

**Power On/Off — Load — Play — Unload**

Power is applied to the player by depressing the player on/off button. The player automatically places itself in the "Load" position (caddy entry door open). The digital readout indicator lights and displays a flashing "L".

To load player, insert loaded caddy into player gently until the player loading mechanism takes hold and pulls caddy into player (DO NOT force caddy into Player). When the caddy spine is latched the loading mechanism will reverse and return the empty sleeve (caddy) out beyond the caddy entry door opening. Remove the empty sleeve (caddy) from the player and the player will automatically place itself in the "Play" mode. During the automatic cycle the digital readout will display —●—. In approximately 10 seconds a picture will appear on the TV screen and the digital readout will begin to display elapsed playing time in minutes.

When "Play" is completed (approximately 60 minutes) the digital readout will display a flashing "E" momentarily then the "E" lights continuously. In approximately 8 to 10 seconds the player automatically places itself in the "Unload" mode. The digital readout will display a flashing "UL" and the caddy entry door will open. Insert empty sleeve (caddy), in same manner prescribed for load procedure, to retrieve the disc and spine from the player. Remove loaded caddy from player and the digital readout will then begin displaying a flashing "L".

**Audio A/B Button (Models SJT 200/300)**

This function is active only when playing a special DUAL sound track or BILINGUAL disc. Press to select either the primary sound track "A" or the secondary sound track "B". Depending upon which sound track is active, the corresponding LED display lamp will light. (A/B).

NOTE: The player automatically selects the proper audio playback mode whether you are playing a special dual sound track, Bilingual, Stereo or monoral VideoDisc

**Visual Search**

Pressing either *Visual Search* Button, Fwd ► or Rev. ◀, (with disc in player) permits faster than normal (16 times

normal speed) movement of the pick-up arm assembly. The stylus remains in contact with the disc permitting *Visual Search* (scan) viewing of the program material (audio is muted during this mode of operation).

**Rapid Access (SJT 100/200)**

Pressing either *Rapid Access* Button, Fwd ►► or Rev. ◀◀ (Player must be in "Play" mode with disc in player) provides rapid movement of the pick-up arm assembly in direction selected. The Stylus lifter circuit is active in this mode of operation therefore the stylus is not in contact with the disc. (Video blanked, Audio muted).

**Hi-Speed Scan (SJT300)**

Pressing either *Hi-Speed Scan* Button, Fwd ►► or Rev. ◀◀ (with disc in player) permits rapid (120 times normal speed) movement of the pick-up arm Assembly. The stylus remains in contact with the disc permitting hi-speed scan (search) viewing of the program material (Audio is muted during this mode of operation).

**Pause/Play**

Pressing the "Pause" Button (with disc in player) places the stylus lifter circuit into operation raising the stylus off the disc. Video is blanked, audio is muted, and there is no movement of the pick-up arm assembly in this mode of operation. The digital readout will display a flashing "P". Pressing the "Pause" button a second time returns the player to normal operation.

NOTE: For Model SJT 300 the in arm stylus cleaner (sweeper) is activated in the "Pause" mode.

**Stereo Sound (SJT 200/300)**

By connecting an external stereo amplifier (optional equipment) to the stereo output jacks on the back of the player you can enjoy stereo sound when playing a stereo disc.

**Video Out Jack (Models SJT 200/300)**

The video output jack (located on the back of the player) makes it possible to connect video from the player directly to a TV set or monitor equipped with a video input jack.

## GENERAL INFORMATION

NOTE: Technicians servicing this product will find helpful the following related RCA Technical Training Publications.

**VideoDisc Manual SJT200/300-1**

This publication may be ordered, for a nominal charge, from: RCA Technical Publications 1-450, P.O. Box 1976, Indianapolis, IN 46206.

The New RCA SelectaVision VideoDisc Player is simple to operate, and easy to install. External connections to and from the player are minimal, involving only intercept and reconnection of the television VHF antenna input lead (cable). Necessary connecting lead (cable) and matching transformers are included to handle all but unusual installations.

1. A 5 foot, 75 ohm coaxial cable connects from the antenna out connector on the player, to the VHF antenna input on the television receiver. Use cable direct if the television has 75 ohm VHF antenna input connector; use via a 75 to 300 ohm matching transformer/adaptor if the television VHF antenna input is 300 ohm.
2. A 300 to 75 ohm matching transformer/adaptor mates a 300 ohm twin lead antenna system (outside or rabbit ears) to the player 75 ohm antenna input system. (Captive, screw type lugs are integral to the 300 to 75 ohm antenna matching transformer/adaptor; strip and insert the 300 ohm twin lead wires then tighten the screws.) Keep in mind — for different or "odd" antenna systems — the antenna input and output of the VideoDisc Player is 75 ohm unbalanced.

Antenna connection instructions should be carefully followed. The player produces an R-F signal which is transmitted on VHF Channel 3 or 4 (switch selectable) frequency. If the player antenna output is connected to an antenna, directly or in parallel from the television antenna input connections, the player may broadcast a signal. Broadcasting an unauthorized signal could violate certain regulations of the Federal Communications Commission regarding the operation of R-F devices. Recheck the installation to avoid any broadcasting possibilities; make sure the 75 ohm shielded cable is used to connect the R-F output of the player to the television receiver, and that no other connections are paralleled from these terminals.

The physical location of the antenna "in" and "out" connectors are depicted in the rear apron photo of the VideoDisc Player (Fig. 2). "F" type connectors accept the VHF antenna input and output cables.

Interface of the antenna system, VideoDisc Player, and monitor television receiver is controlled by an electronic antenna switch in the player. When the Player ON/OFF Switch is in the "OFF" position, the antenna is connected directly (via the player electronic antenna switch) to the television receiver and the television will operate normally. When the player ON/OFF switch is in the "ON" position, the antenna is disconnected and the player R-F output is connected directly to the television VHF antenna input connector. Under this condition the television receiver will receive a signal only on Channels 3 or 4 (switch selectable on the rear of VideoDisc Player Fig. 2). Specifically the VideoDisc Player antenna switch system serves to either connect the antenna system direct to the television VHF antenna input or disconnect the antenna system and connect the VideoDisc Player R-F output direct to the television VHF antenna connector.

Stereo output jacks are available (Models SJT 200/300) for connecting (cable included) stereo sound output to an external Stereo Amplifier (optional equipment). Also available is a Video Output Jack (Models SJT 200/300) for connecting (cable not included) a video signal directly to a television receiver or video monitor equipped with video input capabilities.

The new design of the RCA VideoDisc player uses the single—main circuit board concept. The main circuit board contains nearly all of the electronic circuits. Circuits not contained on the main circuit board are AC input, resonator, pick-up arm preamp, and in the case of the remote controlled VideoDisc player, the remote preamp and remote amplifier circuits.

Servicability of the new VideoDisc player is enhanced by the logical physical arrangement of circuits on the main circuit board. The board is segmented by **circuit area**. AND FURTHER ENHANCED BY PROMINENT ROAD MAPPING ON THE CIRCUIT BOARD. In addition, a component numbering system is used which relates to general circuit areas and will aid in readily locating individual components.

## CIRCUIT PROTECTION

**Fuse (or Device)**

F601

**Circuit Protected**

AC input

**Physical Location**

PW 600

COMPONENT NUMBERING SYSTEM

Circuits not located on the Main Circuit Board and their numerical designation.

Component Numbering Versus Circuits.

- 0 - 99 — Mechanism/Player mounted components
- 100 series — PW Hookup on Arm assembly
- 200 series — Resonator on Arm assembly
- 400 series — Arm Preamp on Arm assembly
- 600 series — AC input
- 900 series — IR preamp (used Sjt 300)
- 1100 series — Remote Receiver (Used Sjt 300)
- 1700 series — Display board assembly
- 5600 series — Function Switch assembly

Circuits located on the Main Circuit Board and their numerical designation.

Component Numbering Versus Circuits

- 2000 series — Power Supply
- 2500 series — Pulse Interference Corrector (PIC)

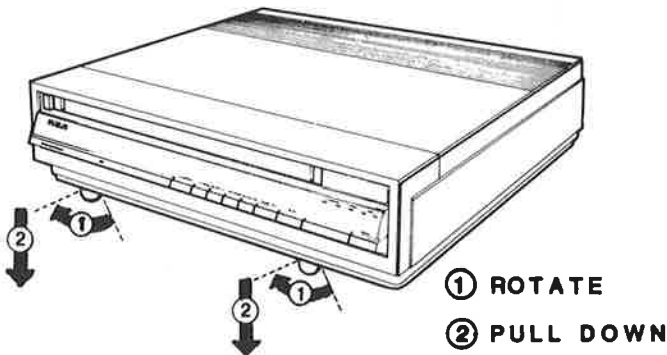
- 2700 series — Video Output
- 3100 series — Non-Linear Aperture Correction (NLAC), Sound Beat Correction
- 3200 series — Video Demodulation
- 3300 series — Comb Filter/Defect Corrector
- 3400 series — Video Converter and Time Base Correction
- 3500 series — RF Modulator
- 4100 series — Audio Modulator
- 4200 series — Audio Track/Hold Mute (CMOS switch)
- 4300 series — Audio Matrix and Buffer (not used Sjt 100)
- 4400 series — Audio Decoder Rectifier (not used Sjt 100)
- 4500 series — Audio Decoder Control (not used Sjt 100)
- 4600 series — Audio Output (not used Sjt 100)
- 5100 series — Player Control
- 5300 series — Kicker Pulse
- 5900 series — Mechanism Control

INSTRUMENT SHIPPING

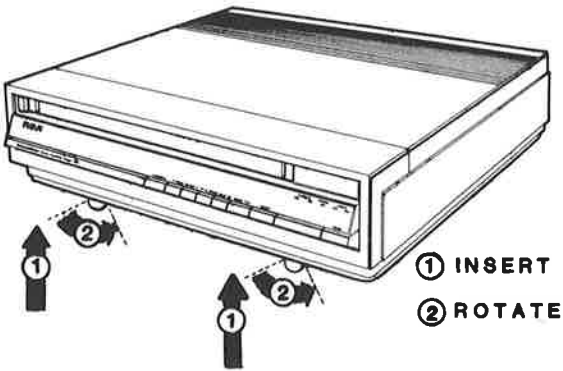
The customer instruction book advises the customer to retain the shipping tabs, original carton and packing material for use should they need to repack the player for moving or shipping.

To reinstall the shipping tabs for moving or shipping:

1. Be certain player is in "OFF" mode (caddy entry door closed).
2. Disconnect player from AC power and remove antenna Connections.
3. Replace shipping tabs (see illustrations).
4. Repack player in original carton for shipping using original packing material.
5. Be certain to include player accessories (antenna hook-up cable and adaptors, stereo hook-up cables — Sjt 200/300 and Remote transmitter—Sjt 300) if instrument is being returned for service.



Shipping Tabs—Removal



Shipping Tabs—Installation

Preparing The Player For Out-of-Carton Transport

When transporting the player out of original packing material, the following guidelines are recommended.

1. Be certain player is in "OFF" mode (caddy entry door closed).
2. Disconnect player from AC power source and remove antenna connections.
3. Replace shipping tabs (see illustrations).
4. Player can now be transported safely.

FREQUENTLY USED ABBREVIATIONS

- AM — Audio Modulation
  - AMA — Audio Mute Primary Channel A
  - AMB — Audio Mute Secondary Channel B
  - ANX — Antenna Transfer
  - AO — Arm Output
  - AS — Arm Stretcher
  - CAB — Channel A/B
  - CO — Clock Output (or Chroma Output)
  - CR — Caddy Reverse
  - CS — Caddy Sense
  - CV — Control Voltage
  - CY — Cored Luminance
  - DD — Decoder Defeat
  - DG — Defect Gate
  - DS — Display
  - FM — Function Motor (or Frequency Modulation)
  - GND — Ground
  - HE — Hall Effect
  - HNC — Home Normally Closed
  - HNO — Home Normally Open
  - Hz — Hertz
  - IC — Integrated Circuit
  - KPO — Kicker Pulse Output
  - LA — Landing
  - LED — Light Emitting Diode
  - LO — Load
  - LSE — Least Significant Digit Voltage
  - MA — Modulator Audio
  - MSE — Most Significant Digit Voltage
- NS — Negative Supply
  - P — Play
  - PAU — Pause
  - PLL — Phase Lock Loop
  - RAF — Random Access Forward
  - RAR — Random Access Reverse
  - Res — Reset
  - RS — Radius Sense
  - RSF — Rapid Search Forward
  - RSR — Rapid Search Reverse
  - SB — Sound Beat
  - SC — Stylus Clean
  - SI — Side Indicator
  - SL — Stylus Lifter
  - SQ — Squelch
  - SR — Sound Reference
  - SS — Spine Sense
  - SWP — Sweeper (in Arm Stylus Cleaner)
  - TT — Turntable
  - UNL — Unload
  - V — Voltage
  - VB — Video Blanking
  - VDO — Vertical Detail Output
  - VR — Voltage Regulator
  - VSF — Visual Search Forward
  - VSR — Visual Search Reverse
  - Y — Luminance or B/W Video
  - Z — Impedence

SAFETY RELATED COPPER PATTERN

Modern circuit design/manufacturing techniques dictate a rather high component density on the printed circuit board utilized in this instrument. It naturally follows that the area available for "printing" copper patterns is also restricted. To maintain high reliability and safety standards, the printed circuit boards are manufactured under carefully controlled conditions and to extremely close tolerances. Some areas of the board are more critical than others due to spacing, pattern size, voltage/current requirements, etc. RCA has concluded, as a result of extensive studies that less-than-optimum repair of copper

patterns in these specific areas can degrade the reliability/safety of the instrument. The critical copper patterns are shown as "dark black" in the illustration (Fig. 3). In the event printed circuit damage is evident in these designated areas (copper pattern broken, lifted, etc.) special soldering techniques are necessary to maintain reliability and safety standards. Contact your local RCA Consumer Electronics Distributor Service Manager before attempting copper pattern repair in the designated areas on the board layout.

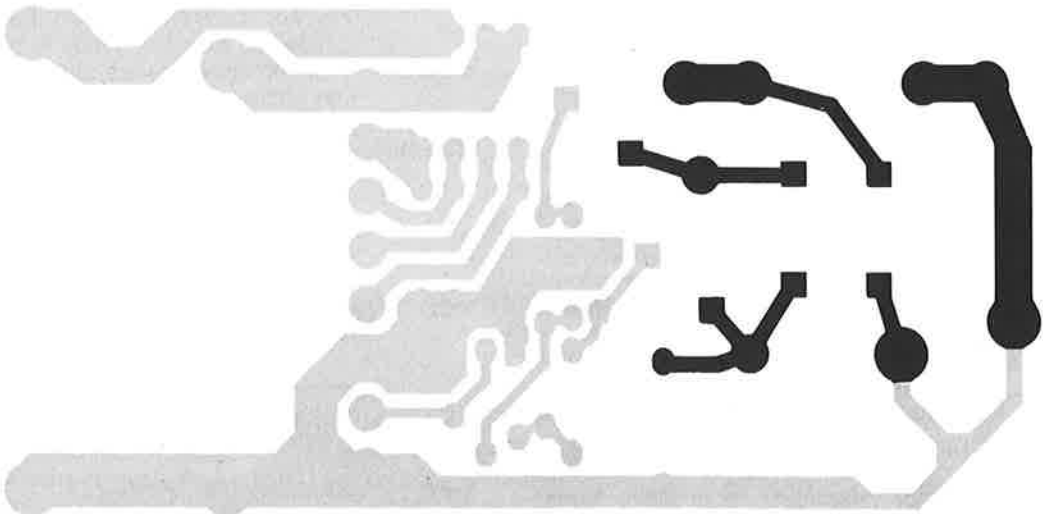


Fig. 3—PW 600 Critical Copper Pattern



GLOSSARY

**Analog** — Of or pertaining to the general class of devices or circuits in which the output varies as a continuous function of the input.

**Angstrom** — One tenth of a millimicron. Angstrom unit is a term utilized to express the length of very short waves.

**Beats** — A term used to describe the unwanted signals produced when two original signals are mixed together.

**Buried Subcarrier** — See Subcarrier, except frequency is down converted. Example: In CED system color burst is 1.53 MHz.

**Burst** — A short time occurrence (8 to 10 Hz) of the color subcarrier signal appearing right after Horizontal sync, but centered on the blanking portion of the video waveform.

**Caddy** — Name given to device in which the VideoDisc is enclosed (see sleeve).

**Chroma** — The color portion of a video signal.

**D Flip-Flop** — A dual solid state processing circuit, the output of which is determined by the input.

**DAXI** — Digital Auxiliary Information recorded on the disc and utilized by the player control microcomputer to control operation of the disc player.

**Delta Frequency ( $\Delta f$ )** — A term to indicate that a signal or frequency has some variation or change.

**Dropout** — A momentary absence of carrier signal off the disc, whether due to uneven stamping or a particle of dust on the disc or stylus.

**Deviation** — A term used to describe how far the FM carrier frequency swings when it is modulated.

**Digital** — Of or pertaining to the class of devices or circuits in which the output varies in discrete steps (i.e., pulses or "ON-OFF" operation).

**Emphasis** — The process of boosting the level of the high frequency portions of the video signal.

**FM Signal** — Abbreviation for Frequency Modulated Signal.

**Field** — One half of a television picture. A field consists of 262.5 horizontal scanning lines across a picture tube. Two fields (line 1 thru 252.5 and line 252.5 thru 525 interlaced) are necessary to complete a fully scanned television picture (frame). The two sweeps of the TV picture tube, or two fields make up one complete TV picture or "frame". Frame repetition is 30 Hz, therefore field repetition is 60 Hz.

**Frame** — One complete television picture (see "Field").

**Gate** — A circuit which will deliver an output only when a specific combination of its inputs are present for use in analog or digital applications.

**Integrated Circuit (IC)** — An electronic device in which both active and passive elements are contained in a single package.

**Interlacing** — The property of the scan lines of two television fields to lie in-between each other.

**Interleaving** — A term used to indicate that the harmonics of the chrominance signal lie in-between the harmonics of the luminance portion of the video signal as it is viewed on a spectrum analyzer. This means that the color information of a video signal

does not interfere with, although it is broadcast at the same time as, the luminance information.

**Jitter** — The name of an effect on the playback picture (sometimes referred to as "Wiggles" or "Flutter"). The picture appears to have a rapid shaking motion.

**Luminance** — This is the portion of the video signal which contains B/W information and sync (see "Y" signal).

**Micro Computer** — ( $\mu C$ ) A compact and inexpensive computer relatively limited in capability and capacity, consisting of a microprocessor and other components of a computer, commonly used to store and process digital information.

**Micron** — One millionth part of a meter.

**Microprocessor** — ( $\mu P$ )— A miniturized integrated circuit device which performs all of the functions of a central processing unit.

**NLAC** — Non Linear Aperture Correction — System which compensates for non-linear response of the stylus to the disc information.

**NTSC** — (National Television Systems Committee)— These four letters identify the United States Color Television Standard.

**PIC** — Pulse Interference Corrector—Circuit which detects and compensates for interference generated in the 900 MHz frequency range.

**Resonator** — A circuit that responds in accordance to oscillations produced in another circuit.

**Sample and Hold (S/H)** — A process by which the value of a particular signal is measured at a specific moment in time — then this signal is stored for later use.

**Servo** — Short for Servomechanism. An electromechanical device whose mechanical operation (for instance, motor speed) is constantly being measured and regulated so that it closely matches or follows an external reference.

**Sleeve** — Another name applied to the caddy in which the VideoDisc is enclosed. (See Caddy).

**Spine** — Device utilized in conjunction with the Video-Disc and caddy to support the disc when it is transferred from the caddy to the player.

**Stylus** — Diamond tipped device utilized to transfer video and audio information from disc to pickup arm assembly electronics.

**Subcarrier** — A carrier signal inserted within the pass-band of a broadcast signal to provide a channel for the transmission of additional information. Example: In color TV, the 3.58 MHz color burst.

**VCO** — (Voltage Controlled Oscillator) An oscillator whose frequency of oscillation is governed by an external voltage and/or timing capacitor in IC applications.

**VCXO** — (Voltage Controlled Crystal Oscillator) Similar to VCO except that a quartz crystal is used as a reference.

**XTAL** — Abbreviation for Crystal.

STEREO/MONO SERVICE ALIGNMENT DISC CONTENT

Segment	Time Display (Minutes)	Video Display	On Screen Display	Audio**	Daxi Band	Audio Code	Service Application
A	* 72	Grey Field		S1: Unmodulated S2: Unmodulated	0	None	Stylus Landing Check
B	* 0 1	Grey Field w/Time Count	0:00 1:12 2:12/3:12	S1: Unmodulated S2: Unmodulated	1		Stylus Landing Adjustment
C	2	Uniform Motion on Grey Field		1020Hz 100%	2	None	Audio Level Adjust Mono Player Visual Search FWD/REV Check
D	6	Color Bars		S1: Unmodulated	3	None	Chroma and Video Adjustments General Picture Quality Check Stereo Indicator Check
E	10	100 IRE, White Field	100 IRE	S1: 480Hz 50% S2: 1020Hz 50%	4	Independent Not Encoded	Video Level Adjust Independent Audio Channel Test
F	13	Grey Field	Left Audio	S1: 1020Hz 50% S2: 1020Hz 50% In Phase	5	Stereo Encoded	Check and Adjust Stereo Separation Left Channel
G	15	Grey Field	Right Audio	S1: 1020Hz 50% S2: 1020Hz 50% Out of Phase	6	Stereo Encoded	Check and Adjust Stereo Separation Right Channel
H	19	120 IRE, 30% Window		S1: Unmodulated	7	None	Modulation Depth Adjust
I	23	5 Step Linearity w/ Defect		S1: Unmodulated	8	Mono Encoded	Defect Substitution Level Adjust
J	27***	Unmodulated (5MHz Carrier)		S1: Unmodulated	None		5.11MHz VCO Frequency Adjust
K	31	Demonstration		S1: Demonstration S2: 1020Hz 100%	10	Independent Not Encoded	General Picture and Sound Check
L	35	Grey Field	No Audio Carriers		11	None	Sound Beat Check
M	39	Grey Field	Audio 1	S1: 1020Hz 100% S2: Unmodulated	12	Independent-1 Not Encoded	Sound Beat Check
N	43	Grey Field	Audio 2	S1: Unmodulated S2: 1020Hz 100%	13	Not Encoded Independent-2	Sound Beat Check
O	47	Grey Field	Audio Decoder Reference	S1: 1020Hz 50% S2: Unmodulated	14	Stereo Encoded	Decoder Testing and Audio Output Measurement
P	49	Grey Field	Audio, -30db	S1: 1020 Hz 1.58% S2: Unmodulated	15	Stereo Encoded	Decoder Testing and Adjust
Q	51	Grey Field	Audio, -20db	S1: 1020Hz 5% S2: Unmodulated	16	Stereo Encoded	Decoder Testing
R	53	Grey Field	Audio, -10db	S1: 1020Hz 15.8% S2: Unmodulated	17	Stereo Encoded	Decoder Testing
S	56	Uniform Motion on Grey Field		S1: Unmodulated S2: Unmodulated	18	Stereo Encoded	Visual Search Check Background Noise Level Check
T	60	Vertical Lines w/Time Count	0:00	S1: Unmodulated S2: Unmodulated	19	Independent	Armstretcher Check and/or Adjustment
U	62 E	Grey Field w/Time Count	2:00/E	S1: Unmodulated S2: Unmodulated	63	None None	Daxi Signal Check For End of Recording
V	63	Grey Field w/Time Count	3:00/5:00	S1: Unmodulated S2: Unmodulated	20	Independent Not Encoded	Arm Travel Limit Check

Note: Time count in Bands T, U and V is continuous (i.e.), clock does not reset at the beginning of bands U and V. To access Band V, Rapid Access FWD must be used. Segment V ending time will depend on arm stop.

\* See Service Data for use of pre-program segments of Bands A and B.

\*\* Unless otherwise noted, Modulation/Deviation shown is for S1 only, and S2 is not present. (S1 = 716kHz carrier; S2 = 905kHz carrier).

\*\*\* Time Display will not increment when Daxi Band is not present (Segment J).

## MECHANICAL OPERATION

## Load Sequence

Pressing the on/off button (turning player on) applies power to the Function Motor. The function motor (running in the forward mode), drives the pulley and 1st reduction gear and the pinion and 2nd reduction gear which in turn drives the upper and lower power assist gears and caddy rollers. The upper power assist gear drives the power assist hub and rod assembly transferring power to the pawl drive gear that in turn drives the function gear. The function gear, as it rotates to the load position opens the caddy (sleeve) entry port door through mechanical linkage, operates the disc transfer rod and activates the mechanism load switch (S9). The digital display will display a flashing "L" indicating the player is in the "Load" mode (See Fig. 4).

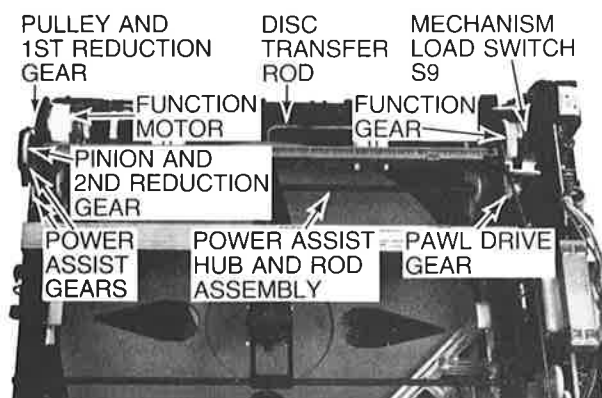


Fig. 4—Mechanism Identification

Insertion of the loaded Caddy (sleeve) into the player first encounters the Pawl Actuating Crank lever which, through mechanical linkage, places the function gear actuating pawl in a non-actuating position. Encountered next the spine holddown pads, caddy lockout assemblies, and front receiver pads are raised and lowered respectively to allow caddy (sleeve) entry. The spindle receiver is then raised, the side receiver pads lowered and the caddy (sleeve) sense switch S4 activated (closed) by the caddy (sleeve).

When the caddy sense switch, S4, is activated (closed), power is applied to the function motor. The caddy (sleeve) rollers begin to rotate, they grasp the caddy (sleeve) pulling it into the player. The caddy (sleeve) then activates (closes) the caddy reverse switch, S8. As caddy (sleeve) insertion nears completion the rear receiver pads are lowered, the caddy (sleeve) lock defeat tabs enter the end of the caddy (sleeve) on either side unlocking the spine tabs which hold the spine and VideoDisc captive in the caddy (sleeve). At the same time the spine latch tabs, are pushed up and over the end of the spine and drop into their latching position holding the spine and VideoDisc captive in the player. The spine sense switch, S5, is also activated (closed) at this time and the side indicator switch, S6, is either activated (closed) or left "off" (open) depending upon which side of the disc is being played. The function motor stops for approximately one (1) second before it begins running in the reverse mode (See Figs. 5 & 6).

With the function motor running in the forward mode the caddy (sleeve) rollers will be driven in the reverse mode. This causes the caddy (sleeve), now empty, to be ejected automatically to a point just beyond the caddy (sleeve) entry door where it must then be manually removed.

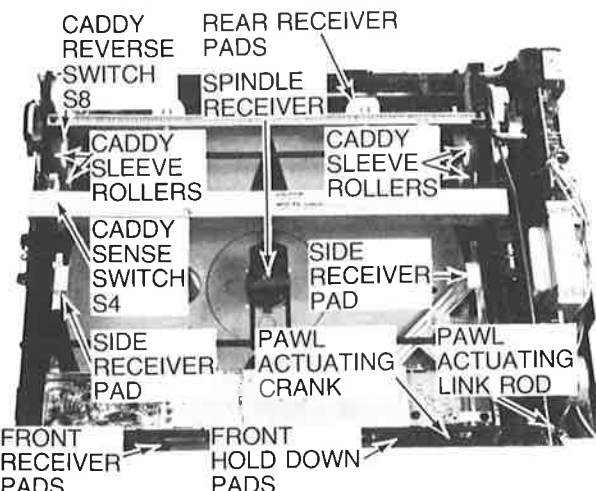


Fig. 5—Mechanism Identification

As the caddy (sleeve), now empty, begins its ejection travel from the player—the caddy (sleeve) lock defeat tabs (spring loaded) pop up above the spine to the position necessary for performing their function during the "unload" process. The rear receiver pads rotate up to their normal position to support the disc and spine. The caddy (sleeve) reverse switch, S8, is deactivated (opens), however the function motor continues to run. When the caddy (sleeve) is released by the caddy rollers it must then be manually removed from the player. As the caddy (sleeve) is being manually removed from the player—the caddy sense switch, S4, is deactivated (opens), the side receiver pads (spring loaded) raise up to support the spine, the front receiver pads (spring loaded) raise and the spine holddown pads (also spring loaded) lower to support the disc and spine. The last item to be released is the Pawl Actuating Crank, which is used to prevent the function gear actuating pawl from being tripped during the time a caddy (sleeve) is in the player (See Figs. 5 & 6).

NOTE: The function motor, now controlled by the mechanism  $\mu$ C, is still running in the forward mode.

Immediately upon release of the pawl activating crank the function gear actuating pawl is released, through mechanical linkage, and allowed to revert to its normal position. On the very next rotation of the pawl drive gear it strikes the function gear pawl placing the function gear

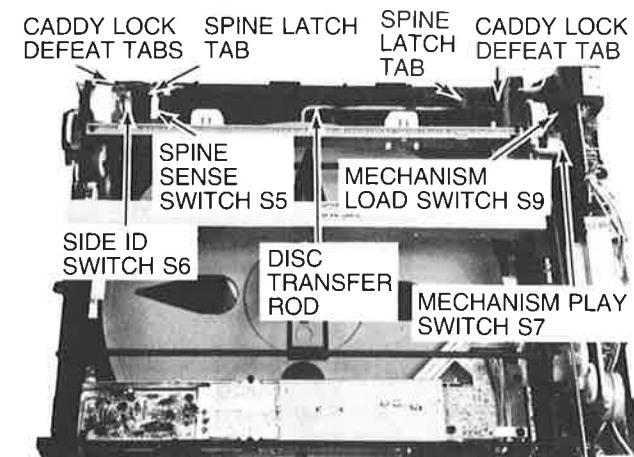


Fig. 6—Mechanism Identification

Continued on next page

## MECHANICAL OPERATION (continued)

teeth, thus driving the function gear through its rotation. As the function gear is driven through its rotation several mechanical functions occur (via cams which are an integral part of the function gear) that operate mechanical linkage. The rear receiver pads are moved back slightly and the front receiver pads are moved forward slightly to allow the disc to be lowered onto the turntable. The caddy (sleeve) entry door is closed, the disc is lowered onto the turntable by the Disc Transfer Rod and the mechanism play switch, S7, is activated (closed). With the activation (closing) of the mechanism play switch the turntable powers up and the arm assembly is moved into position over the disc, the stylus drops making contact with the disc producing picture and sound on the monitor television.

NOTE: A time lapse of approximately 10 seconds is required from turntable power up until picture and sound appear on the monitor TV.

## Stylus Clean

The stylus is cleaned during the time the arm assembly is moved forward from its "home" position to its "play" position over the disc. The stylus cleaner pad is spring loaded and moves forward on an angle controlled by the arm assembly. About half-way through the forward movement of the stylus cleaner pad assembly the arm assembly hesitates (stops momentarily), the stylus is dropped and then the arm assembly and stylus cleaner pad continue their forward movement dragging the stylus across the cleaner pad in a parallel path cleaning the stylus. Almost immediately the stylus lifter circuit is activated lifting the stylus off the cleaner pad. When the stylus cleaner pad reaches the end of its travel the arm assembly continues its forward movement and positions itself over the disc at a predetermined starting point controlled electronically by activation of Landing Switch S10, contacts 1 & 2. The stylus is then dropped onto the disc to begin its function during the "Play" process (See Fig. 7).

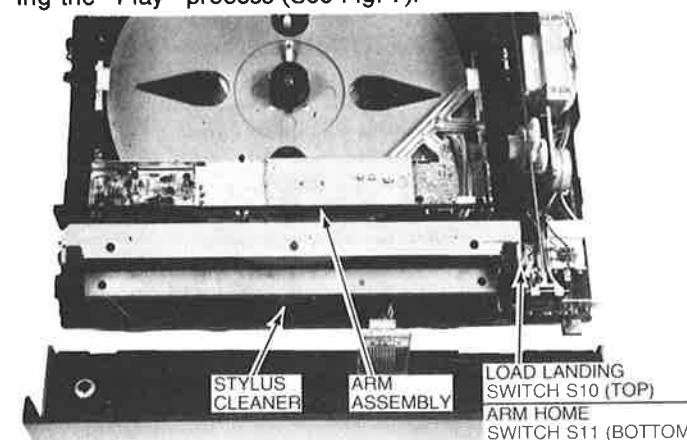


Fig. 7—Stylus Clean

## Unload

At "end-of-play" the digital display will display a flashing "E" for a period of approximately four (4) seconds, then display a non-flashing "E" during the time the arm assembly is being returned to its "Home" position. When the arm assembly reaches its home (outermost) position, Landing Switch, S10, is deactivated (open) and Arm Home switch, S11, is activated (terms. 1 & 3 closed). The stylus cleaner pad is also forced to its outermost position by the arm assembly and the turntable electronically seeks its locked position.

When the arm assembly reaches its Home position Arm Home switch, S11 opens permitting the function motor to be activated in the reverse mode. With the function motor running in the reverse mode the function gear is rotated through its cycle opening the caddy (sleeve) entry door, through mechanical linkage, and the VideoDisc is raised to the "unload" position by the Disc Transfer Rod.

NOTE: There is a 5 minute time-out period in the "unload" mode. If the disc and spine is not removed during this period the disc is returned to the turntable and the player places itself in the "Pause" mode.

Insert empty caddy (sleeve) through the caddy (sleeve) entry port door in the same manner used when the player was loaded. The same series of events will occur as occurred during the "Load" sequence with the following exceptions. The caddy (sleeve) makes contact with the caddy lock defeat tabs (these are the tabs used to release the spine and VideoDisc from the caddy during the "load" process and sprang up when the caddy was removed) forcing them up over the caddy (sleeve) which in turn forces the spine latch tabs to release the spine. The spine and VideoDisc are forced into the empty caddy (sleeve) by the spine push back springs locking it securely. The caddy (sleeve), with the spine and disc locked securely inside, can now be safely ejected by the caddy rollers. When the caddy (sleeve) is removed past the caddy sense switch S4, the switch is deactivated removing power from the function motor. The player automatically reverts to the "Load" mode. At this time the loaded caddy may be turned over and re-loaded in the player to play the other side of the VideoDisc. **DO NOT** leave the player in the "Load" mode for any extended period of time. Dust or other contaminants could enter the mechanism through the open caddy entry port door and cause damage to the unit (See Fig. 8).

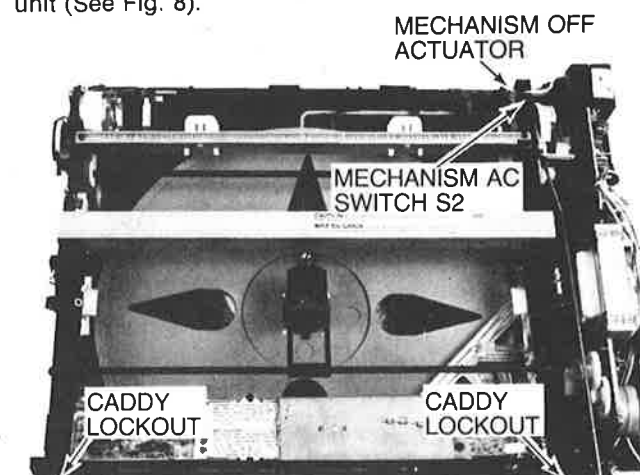


Fig. 8—Unload and Off

## Off Position (Disc and spine removed)

Pushing the "OFF" button (to turn player off) makes the player think it has been loaded with a disc. The function motor runs in the forward mode operating the function gear which begins rotating as if to drop a disc on the turntable. However with no spine in the player the mechanism "OFF" actuator comes into play. At about half-rotation of the function gear, a cam (an integral part of the function gear) forces the mechanism "OFF" actuator up against mechanism AC switch, S2, turning it off (open) removing AC power from the player. The same cam also operates



## ELECTRONIC SYSTEMS DESCRIPTION

mechanical linkage which closes the caddy entry port door and holds the Lockouts and Pawl Actuating Crank rigid preventing insertion of a loaded caddy into the player in the "OFF" position (See Fig. 8).

Fig. 46 — is a combined electrical system block diagram of RCA SJT 100/200/300 VideoDisc players. The SJT 100 being the basic VideoDisc player with monaural audio, the SJT 200 being a stepped-up version of the SJT 100 featuring video output and stereo audio output, and the SJT 300 being a stepped-up version of the SJT 200 featuring Remote Control and Hi-Speed scan. Most electronic circuits in the VideoDisc player can be separated into two basic functional categories; PLAYER CONTROL and SIGNAL PROCESSING. One large Master Circuit Board contains the majority of the electronic circuits in the VideoDisc player.

A micro computer ( $\mu$ C) integrated circuit is the heart of the player control function. The micro-computer receives input commands from the user-operated function switches and, in turn, controls the operation of the player. The player control  $\mu$ C also decodes the **Digital Auxiliary Information** (DAXI) on the VideoDisc to develop the elapsed playtime readout and to control the forward movement of the pick-up arm assembly during the "Play" mode. The signal processing circuits are equipped with several integrated circuits and discrete devices, the majority of which are mounted on the master circuit board assembly with the remainder being on the pick-up arm assembly. The signal processing circuits detect the video and audio information on the VideoDisc, demodulates it and processes it through a comb-filter circuit, and then modulates it onto either a channel 3 or channel 4 television RF carrier. This modulated television RF carrier signal is then connected through coaxial cable to any NTSC television receiver.

### Functional Operation

Operation of the VideoDisc player is totally controlled by the player control micro-computer. When the user selects an operating mode—**Rapid Access Forward** or **Reverse**, **Visual Search Forward** or **Reverse**, **Pause/Play** or **Reject**—input commands related to that mode are fed to the microcomputer. The microcomputer decodes these input commands and, in turn, uses the decoded information to "direct" other player control electronics to establish the electrical conditions required to perform the selected mode of operation. The state of all signal processing circuits is controlled by the Not Squelch (**SQ**) output of the player control microcomputer. When the Not Squelch line goes to a logic "Lo" state, all of the signal-processing electronic circuits are disabled (squelched).

The player control microcomputer has direct control over the pickup arm assembly and the mechanism control microprocessor. This involves:—operation of the Function motor (to "Load" and "Unload" the player); — the turntable motor; — the arm drive (stepper) motor operation, moving the arm forward (Toward center of disc) during normal play — the stylus lifter operation, raising and lowering the stylus as the various functions are initiated; — and the stylus kicker circuits, enabling the system to provide the **VISUAL SEARCH** feature. The player control microcomputer also controls the direction of the arm drive (stepper) motor. In the **RAPID ACCESS REVERSE**, and **VISUAL SEARCH REVERSE** operating modes, the microcomputer instructs the arm drive (stepper) motor to operate in the reverse mode. The player control microcomputer also generates the elapsed play time display.

The time display information is developed from the Digital Auxiliary Information (DAXI) signal. This signal is pre-recorded on the VideoDisc on line 17 of each vertical field. The DAXI signal includes a field identification number that is decoded by the player control microcomputer. This decoded information is used by the microcomputer to develop the elapsed time display. The DAXI code is not present in the **RAPID ACCESS FORWARD** or **REVERSE** operating modes because the stylus is lifted from the disc. Therefore, during these two modes of operation the time display must be alternately maintained so that the approximate elapsed time of the program material can be tracked while the stylus is lifted and the arm is moved in either direction across the disc. This is accomplished by the player control microcomputer counting the steps taken (either forward or reverse) by the arm drive (stepper) motor, then computing the approximate elapsed time by tracking the position of the arm relative to the disc radius.

The signal processing electronics on the pickup arm assembly detect information recorded on the VideoDisc. The arm also contains components for providing the features of **VISUAL SEARCH FORWARD** and **REVERSE** as well as locked groove protection. They are: the "stylus kicker" coils which will cause the stylus to skip two grooves of the VideoDisc; the "armstretcher" transducer which corrects for the timebase variations in the recovered chrominance and luminance signals.

NOTE: The arm assembly of VideoDisc player Model SJT 300 also contains an **in arm** stylus sweeper which is activated when the player goes into carrier distress and remains there for a period of 3 seconds. It is also activated each time the player is placed in the "Pause" mode.

The primary function of the pickup arm signal processing electronics is to detect the information recorded on the VideoDisc. This is accomplished by modulating a 910 MHz VHF resonator circuit with the capacitance changes on the VideoDisc surface. The variations in capacitance on the VideoDisc surface causes the 910 MHz resonator center frequency to be modulated. This, in turn, amplitude modulates a fixed 915 MHz oscillator signal. The signal is then peak detected, with the resultant signal representing the capacitance variations on the VideoDisc. The signal is then preamplified and AFT controlled before being applied to the remaining signal processing electronics. The Arm Output (AO) signal contains the video and audio FM-modulated carrier information and all of the information (DAXI) necessary for player control.

The AO signal is applied to the Main Circuit Board assembly where it is distributed to the player control electronics, the video signal processing electronics, and the audio processing electronics.

In the signal processing electronics of the monaural VideoDisc player (SJT 100) the AO signal is applied to two (2) FM demodulator ICs one for video processing and one (1) for audio processing. In the signal processing electronics of the stereo VideoDisc player (SJT 200/300) the AO signal is applied to three (3) FM demodulator ICs. One (1) for video processing and two (2) for audio processing.

In the case of a Monaural VideoDisc a single audio track is imprinted on the disc at 716 kHz. In the case of a stereo or bilingual VideoDisc two (2) audio tracks are imprinted on the disc. One at 716 kHz, the other at 905 kHz.

Before the AO signal is applied to the Video Demodulator IC, it is passed through a Non Liner Aperture Correction

*Continued on next page*

## ELECTRONIC SYSTEMS DESCRIPTION (continued)

(NLAC) circuit. The NLAC circuit removes the 716 kHz audio modulation from the video information. It does this by phase inverting the audio modulation, and then adding it back to the original signal. This cancels out the 716 kHz audio modulation in the carrier information. The video FM carrier, with the 716 kHz audio modulation removed is then applied to the Video demodulator IC and a Pulse Interference Corrector (PIC) circuit.

The purpose of the Pulse Interference corrector (PIC) circuit is to prevent radar and other strong RF pulses in the 900 MHz range from interfering with the operation of the VideoDisc Player. The PIC circuit detects the presence of such pulses and instructs the defect corrector in the Comb Filter and Defect Corrector integrated circuit to substitute the previous line of video information.

The Video Demodulator IC, which demodulates the video carrier, also contains a defect detector circuit used to activate the defect corrector in the comb filter IC. Thus allowing a portion of the previous horizontal line to be inserted when a defect caused by loss of carrier occurs. The output of the video demodulator, being composite video with "buried" subcarrier chroma, is then applied to a comb-filter circuit. The comb-filter dynamically separates chrominance and luminance information from the composite video information. The output of the comb filter is "combed" chrominance and "combed" luminance. The combed chrominance output signal contains low frequency luminance information and the DAXI signal which is transmitted with each vertical field. After bandpassing the 1 to 2 MHz chroma signal, the two remaining signals (low frequency luminance and DAXI) are separated by low pass filters. The low frequency luminance information is recombined with the "combed" luminance information to provide the luminance output. Vertical Detail Output (VDO) containing the DAXI signal is supplied via the DAXI buffer IC to the player control microcomputer.

The luminance and chrominance information is coupled from the comb-filter circuit to the video converter circuit. The video converter up-converts the 1.53 MHz chrominance information to 3.58 MHz. The 3.58 MHz chroma and the luminance information are then combined. The resultant composite video signal is then supplied to the RF modulator where the demodulated audio signal is added and a RF signal on channel 3 or channel 4 is developed for output to a standard NTSC television receiver.

Also developed in the video converter stage is the drive signal for the "Armstretcher" time base corrector circuit. The correction signal is developed by comparing the up converted 3.58 MHz chroma information with a crystal controlled 3.58 MHz reference oscillator. Any phase or frequency difference between the two signals develops an error signal which is applied to the arm-stretcher circuit. The armstretcher circuit operates a solenoid (located on the pick up arm assembly) moving the stylus (laterally with respect to the disc) to maintain a constant disc to stylus velocity. The armstretcher circuit output is also coupled to the converter oscillator (5.11 MHz VCXO) in order to maintain phase lock between the up converted 3.58 MHz color signal and the crystal controlled 3.58 MHz reference oscillator.

A Video Noise Coring circuit is used in conjunction with the video converter circuit to eliminate high frequency signals below 5 IRE peak-to-peak from the composite video output signal. The "combed" luminance signal is

capacitively coupled to a noise coring amplifier stage where it is inverted. The inverted signal is then direct coupled to a non-inverting noise coring buffer stage. The non-inverted signal is coupled back to the input circuit of the noise coring amplifier stage through a coring circuit consisting of a coupling capacitor and two (2) coring diodes. This represents a negative feedback of all signals above 5 IRE peak-to-peak which is 180 degrees out-of-phase with the incoming signal. Therefore all signals above 5 IRE will be cancelled at the input of the noise coring amplifier stage. Hence, the signal at the output of the noise coring buffer stage will contain only signals below 5 IRE peak-to-peak. This signal is then added, 180 degrees out-of-phase, to the composite video signal from the video converter IC. The result being elimination of high frequency signals below 5 IRE peak-to-peak from the composite video output signal, thus reducing high frequency noise in the video information.

### Audio Signal Processing

As previously stated, in the case of a monaural VideoDisc a single audio track is imprinted on the disc at 716 kHz. The AO signal is applied to a Band pass filter which passes only the 716 kHz audio information. This information then is applied to the 716kHz Audio FM Demodulator IC. After demodulation the signal is coupled to a Sample and Hold CMOS switching IC. The audio signal then is capacitively coupled to the RF Modulator circuit.

In the case of a Stereo or Bilingual VideoDisc two (2) separate audio tracks are imprinted on the disc—one at 716 kHz the other at 905 kHz. The AO signal is applied to two (2) Band Pass Filters one of which passes only the 716 kHz audio signal and the other passes only the 905 kHz audio signal. The audio signals are then applied to two (2) audio demodulator IC's. The 716 kHz signal is processed by the (L + R) audio demodulator IC and the 905 kHz is processed by the (L - R) audio demodulator IC.

The signals are then routed through a TRACK/HOLD and MUTE CMOS Switching IC. The (L + R) signal is applied to a non-inverting OP Amp and then to the base of the Right and Left channel audio buffer stages. The (L - R) is applied to a non-inverting OP Amp and then to the base of the Left channel audio buffer stage. It is also applied to an inverting OP Amp, which provides the necessary inversion of the (L - R) signal, the output of which is applied to the base of the right channel audio buffer stage.

Separation takes place in the base circuit of the left and right channel audio buffer stages. With both (L - R) and (L + R) signals present at the base of the left channel audio buffer the right channel information is cancelled leaving only the left channel information at its output. Likewise with both [-(L - R)] and (L + R) signals present at the base of the right channel audio buffer the left channel information is cancelled leaving only the right channel information at its output.

The output of the left and right audio buffers (now separated audio) is applied to three (3) circuits. First is the transconductance audio output amplifier IC; second the right and left audio signals are applied to the noise reduction decoder circuit which generates a gain control signal and couples it back to the transconductance audio output amplifier; third, the right and left audio signals are summed together and coupled via the CMOS switching IC to the RF modulator circuit. After final amplification by the

*Continued on next page*



## ELECTRONIC SYSTEMS DESCRIPTION (continued)

audio output IC the audio signals are then de-emphasized and applied to their respective audio output jacks.

The ON or OFF state of the Track/Hold and Mute electronic CMOS switching IC is electronically determined by the DAXI code imprinted on the VideoDisc being played. In the case of a monaural disc, the portions of the CMOS switch IC Controlled by pins 5, 6 & 13 (pins 5, 6 & 13 go to high state) will be activated allowing the 716 kHz (or right channel audio) to be passed for processing. In the case of a stereo disc, the portions of the CMOS switch IC controlled by pins 5, 6 & 12 (pins 5, 6 & 12 go to high state) will be activated allowing both the 716 kHz (right channel audio) and 905 kHz (left channel audio) to be passed for processing. In the case of a bilingual VideoDisc, the state of the CMOS switches depends on which audio channel you choose to operate. If you choose to operate primary channel "A", CMOS switching IC pins 5, 6 and 13 will be "high" allowing only channel "A" (716kHz) information to be passed for processing. If you choose secondary channel "B", CMOS switching IC pins 12 and 13 will be "high" allowing only channel "B" (905 kHz) information to be passed for processing.

Muting is accomplished by placing pins 5 and 12, of the CMOS switching IC, in a "low" state thereby opening their respective switch sections.

## Decoder Operation

The original Stereo audio signal stamped onto the VideoDisc is compacted from a dynamic range of (+12db to -40db) to (+6db to -20db) for recording on the disc itself. To reproduce the original stereo audio signal a decoder system has been incorporated in the "Stereo" VideoDisc Player audio signal processing circuitry. The audio signal from each channel is coupled via a 100 Hz

high pass filter into a pair of Op Amps. One is an inverting amp the other noninverting. All four of these Op Amps, tied together at their outputs, perform like a full wave rectifier. Another Op Amp, whose output is controlled by a fixed bias, sets the output of the rectifier stages. This permits a maximum signal expansion of (-20db) changed to (-40db) point level. The output of the rectifier Op Amps is then coupled to a decoder Op Amp (works like a filter) whose output is applied to another decoder Op Amp (a DC amp) creating a variable DC voltage at its output. This variable DC voltage is then processed by a time constant network which performs the actual decoding function. The output of the time constant network is then applied to an additional Op Amp. The output of this Op Amp (also a variable DC voltage) is used to control the current flow through a Current source transistor. The output of the current source transistor then is used to control the gain of the transconductance amplifier stages for both the Left and Right Channel audio output.

NOTE: The decoder circuit is operational only when playing a Stereo encoded (compacted) VideoDisc. When a monaural or bilingual VideoDisc is being played a fixed bias is applied to the Op Amp immediately preceding the decoder time constant network. This in turn places a constant bias on the Transconductance amplifier stages in the Audio Output Integrated Circuit.

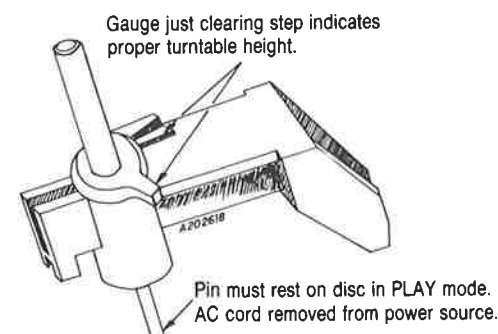
Video Output is provided on Stereo VideoDisc players (SJT 200/300). The composite video signal is tapped off, just prior to being applied to the RF Modulator stage, and applied to a Video buffer stage. The output of the Video Buffer stage is connected to a video output jack on the rear of the player. This provides a 1V p-p video output signal when terminated with a 75 ohm load.

## TURNTABLE HEIGHT ADJUST

To check turntable height—With disc in player in "Play" mode remove AC cord from power source. Remove stylus cartridge and store in safe place. Insert turntable height gauge (see replacement parts list for Stock No.). Hold height gauge in Arm Assembly firmly. Be sure height gauge plunger is free to indicate properly (see illustration).

1. If gauge plunger remains on lowest step—raise turntable height by adjusting height adjust screw (Item —, Fig. 42) clockwise.
2. If gauge plunger moves to highest step—lower turntable height by adjusting height adjust screw counterclockwise.
3. Proper turntable height—when gauge plunger passes over lowest step on gauge and does **not** pass over highest step.

**CAUTION:** Use old disc or reserve one side of test disc for this adjustment. DO NOT use a good disc for this procedure.



## Turntable Height Gauge

NOTE: Turntable height adjust screw is an Allen head screw accessible from the bottom with a (1/16") Allen wrench. Some instruments may use a locking screw (same size). First try turning screw clockwise, if screw will not turn with slight pressure the instrument uses a locking screw which must be removed to accomplish turntable height adjust. Replace locking screw when adjustment is complete.

## INSTRUMENT DISASSEMBLY

## Cabinet Top Removal

1. Place instrument in "off" mode—remove power plug from 120V AC power source.
2. Remove two (2) posi-drive (+ head) screws Fig. 2.
3. Grasp cabinet top at bottom edge on either side (towards the rear). Pull up and to the rear freeing cabinet top front lip from under the front panel and remove cabinet top.
4. To reassemble—reverse procedure.

## Front Panel Removal

1. With cabinet top removed and player in "Play" mode—remove AC cord from power source. Use needle nose pliers and carefully remove door push rod spring from front receiver pad (left and right sides) Fig. 9.
2. Grasp front panel along top rear edge—lift rear edge slightly and pull front panel away from player.
3. Remove flex cable plastic cover, disconnect flex cable connector and remove front panel.
4. To reassemble—reverse procedure.

NOTE: When removing front panel it is necessary that the arm assembly be placed in its forward most position. See stylus cartridge removal for procedure.

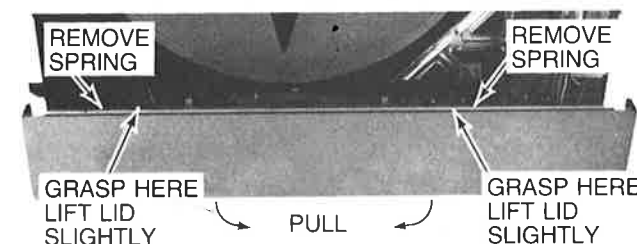


Fig. 9—Door Push Rod Spring

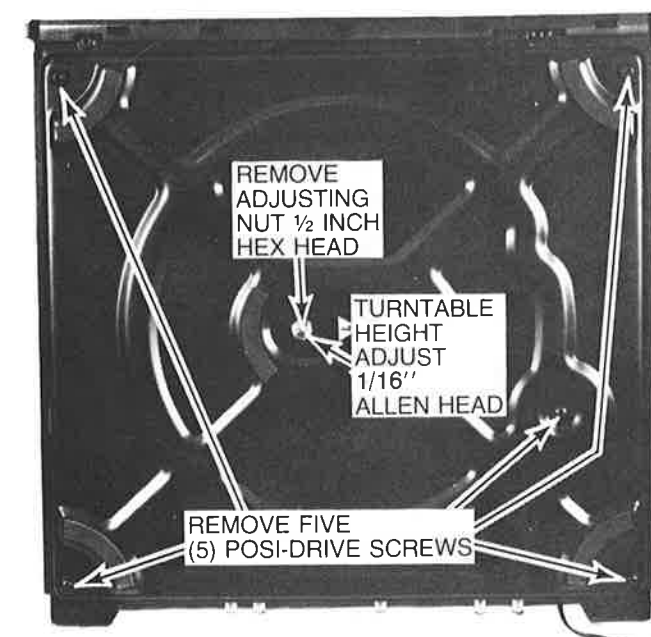


Fig. 10—Bottom Cover

## Bottom Cover Removal

1. Remove stylus cartridge and store in safe place. Place instrument, bottom up, on workbench with soft surface. If cabinet top has been removed also remove receiver spindle assembly (Fig. 14)
2. Remove adjusting nut (1/2 inch Hex Head) and reinforcing plate (1 1/4" washer) from center of bottom cover.
3. Remove five (5) posi-drive (+ head) screws Fig. 10.
4. To replace—reverse procedure.

NOTE: When replacing Bottom Cover—just start adjusting nut and screw. Properly seat Bottom Cover then: (a.) tighten screws (b.) tighten adjusting nut.

## Master Circuit Board Removal/Service Position

1. Remove cabinet top and receiver spindle assembly, and stylus cartridge place instrument bottom up on workbench with soft surface and remove bottom cover.
  2. Remove ten (10) posi-drive (+ head) screws Fig. 11.
  3. Remove main circuit board by lifting front edge up to approximately a 10° to 15° angle, so as to clear all obstacles, then move board forward towards front of instrument until antenna connectors clear rear edge of base plate.
  4. After circuit board is clear of baseplate rotate board horizontally 90° and lay beside instrument.
  5. Turn bottom plate over and fasten in position on baseplate with center adjusting nut and reinforcing plate (1 1/4" washer).
- NOTE: Bottom plate must be installed in prescribed manner to operate instrument in service position.
6. Place instrument and circuit board in upright position (Fig. 12), reinstall receiver spindle assembly and reconnect front panel flex cable to flex cable connector. Instrument is now in operational service position.
  7. To reassemble—reverse procedure.

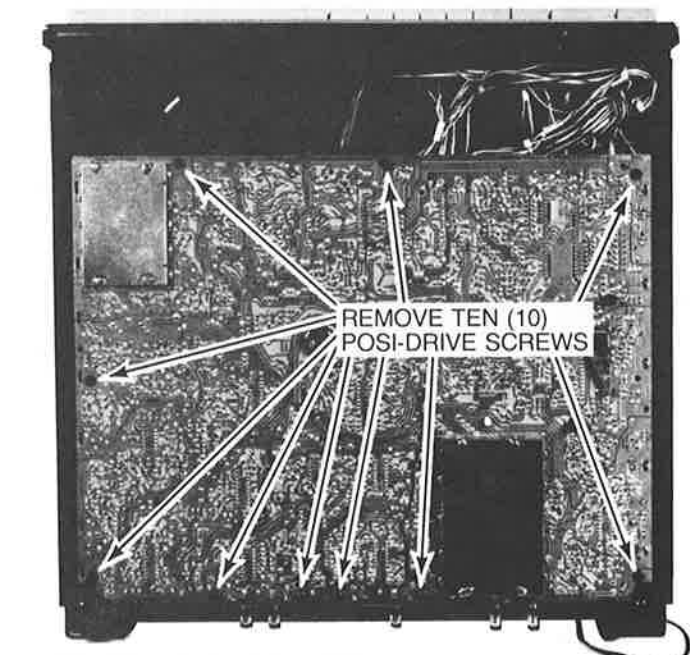


Fig. 11—Master Circuit Board

## INSTRUMENT DISASSEMBLY (continued)

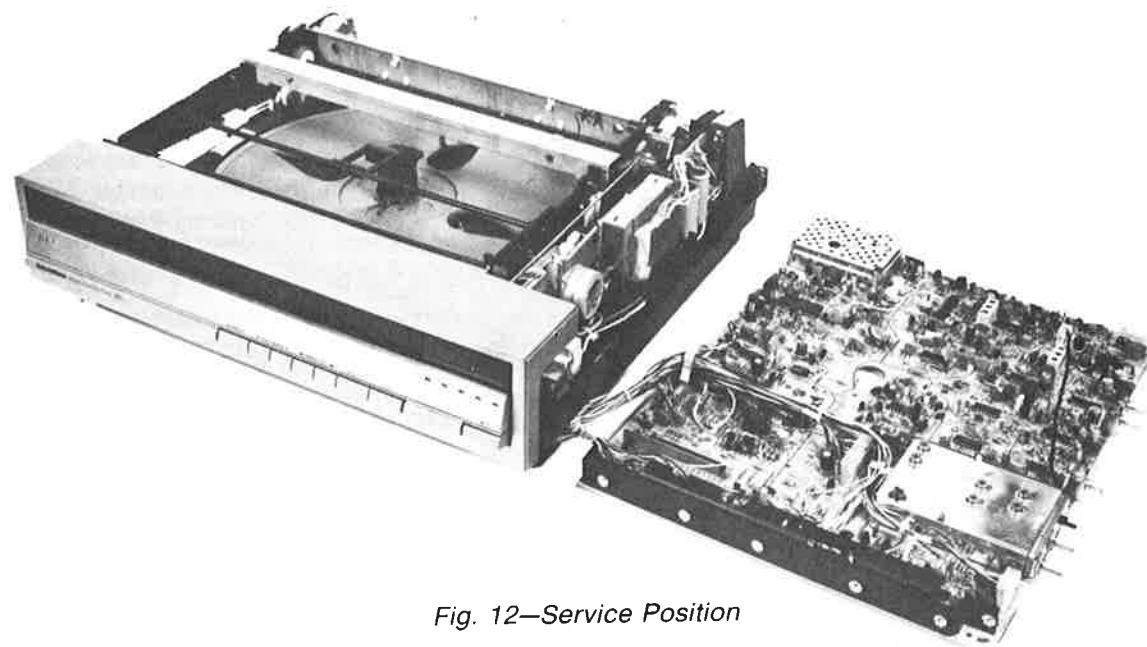


Fig. 12—Service Position

## Arm Drive Assembly Disassembly

1. With cabinet top and front panel removed—remove one (1) posi-drive (+ head) screw Fig. 13.
2. Unsolder and remove Brn. and Wht/Brn wires from radius sense control.
3. Remove stepper motor from arm drive assembly by removing two (2) small posi-drive (+ head) screws and lay stepper motor to the side out of the way.
4. Move arm drive assembly toward center of player and lift up to remove from player.
5. To replace any gear—first remove wire nut from 3rd reduction gear mounting stud and remove 3rd reduction gear. The 2nd and 1st reduction gears are now accessible.
6. To reassemble—reverse procedure. Be certain ESD ground spring is dressed to the outside of stepper motor mounting screw.

NOTE: After replacing arm drive assembly—apply power to player. "Load" player with a VideoDisc and rapid access arm assembly to its innermost position. Reject player and unload VideoDisc. If a clicking noise is heard during this procedure—disregard—the radius sense control gear is resetting itself. Be certain during this procedure that the arm assembly does indeed reach its innermost and arm home positions.

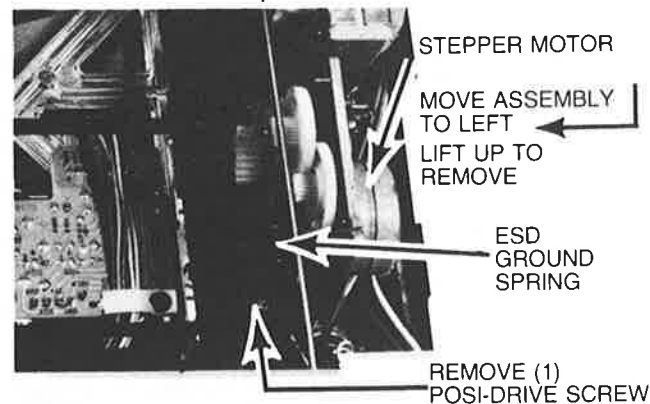


Fig. 13—Arm Drive Assembly

## Stylus Cartridge Removal

1. With cabinet top removed—remove AC plug from power source.
2. Using thumb—rotate 2nd reduction gear (Fig. 14) in counter clockwise direction moving the arm assembly to a point where the stylus cartridge access cover (lid) is accessible.
3. Using a small blade screwdriver—unlatch stylus cartridge access cover (lid) latch spring and open access cover (lid).
4. Using thumb and forefinger—grasp stylus cartridge and push it slightly to the right against the arm-stretcher coil assembly. With a rocking motion lift left end of cartridge slightly, then lift cartridge straight up and out of arm assembly.
5. To replace—reverse procedure.

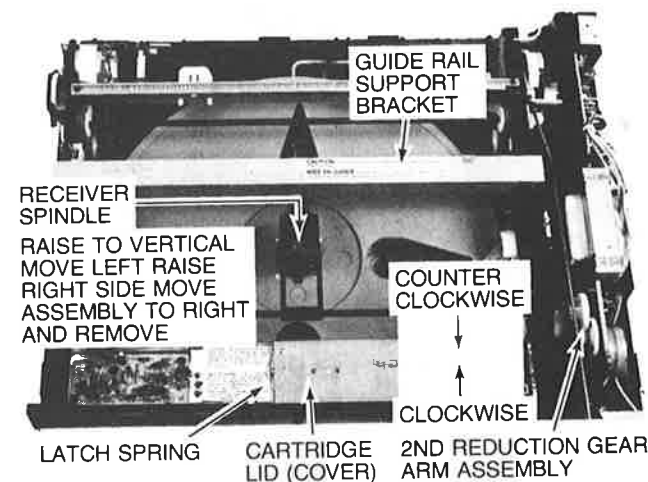


Fig. 14—Stylus Cartridge and Receiver Spindle

## Receiver Spindle Assembly Removal

1. With cabinet top removed—rotate receiver spindle assembly to a vertical position (Fig. 14).

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## INSTRUMENT DISASSEMBLY (continued)

2. Move receiver spindle assembly to the left until the right side just clears the right rail assembly.
3. Lift up on right side of receiver spindle assembly until it clears the right rail assembly.
4. Move receiver spindle assembly to the right until it clears the left rail assembly and remove the receiver spindle assembly from the player.
5. To replace—reverse procedure.

## Stepper Motor Removal

1. With instrument in service position—remove stepper motor plug, P2, from main circuit board.
2. Cut four (4) wire ties and pull stepper motor cable and plug assembly up through baseplate.
3. Remove two (2) small posi-drive (+ head) screws used to mount stepper motor and remove stepper motor (Fig. 13).
4. To replace—reverse procedure. Replace wire ties and observe original lead dress.

## Function Motor Removal

1. With cabinet top removed—disconnect Blu and Wht/Blu wires from function motor (observe polarity).
2. Remove two (2) posi-drive (+ head) screws and remove gear cover Fig. 16.
3. Remove square drive belt Fig. 16.
4. Remove two (2) small posi-drive (+ head) screws and remove function motor.
5. To replace—reverse procedure.

NOTE: When replacing Function Motor observe polarity of wiring. Solid blue wire connects to stake beside small plastic stud.

## Guide Rail Assembly Removal

1. Place player in "Load" mode and remove AC plug from AC power source. With cabinet top and front panel removed—remove guide rail assembly front support bracket ESD ground spring Fig. 15, and ground clips from guide rail bracket and pivot support brackets.
2. Remove one (1) small posi-drive (+ head) screw from S2 AC switch shield and remove shield (items 45 & 44, Fig. 47).
3. Remove AC switch, S2, from right rail assembly.
4. Remove AC fuse shield from PW 600 circuit board and mounting bracket assembly.

NOTE: Removal of PW600 circuit board is not necessary for guide rail assembly removal. However it is recommended for ease and convenience.

5. Unsolder and remove AC input cord from PW600 and remove PW 600 circuit board from bracket assembly. One plastic clip located at the front top edge of mounting bracket holds the circuit board captive. Carefully lift up on this plastic clip and separate circuit board and mounting bracket, then lift straight up on circuit board until it is free of the baseplate. Lay circuit board to right side.
6. Remove PW 600 plastic mounting plate. Use 1/4" blade screwdriver through access holes along bottom edge of plate to spring plastic clips holding plate captive to baseplate and lift mounting plate straight up and free of baseplate. Remove switches S7 and S9 from plate assembly.

**CAUTION:** Switches S7 and S9 are mounted on the plate assembly by molded plastic clips and studs, use special care when removing and replacing switches to avoid breaking them.

7. Grasp mechanism AC switch (S2) off actuator (item 47, Fig. 47) between thumb and forefinger and pull actuator back and free of right rail assembly and function gear (some pressure will be required to perform this step).
8. Using thumb rotate mechanism 2nd reduction and pinion gear in a clockwise direction until the function gear on right rail assembly is engaged. Continue rotating gears until the disc transfer rod coupler (item 38, Fig. 47), mounted on function gear, reaches its top most position. This is the mechanism (player) "off" position.
9. Remove disc transfer rod from coupler and remove coupler from function gear.
10. Remove switches S4 and S8 from left rail assembly and place them out of the way.

**CAUTION:** Switches S4 and S8 are mounted on the left rail assembly by molded plastic clips and studs, use special care when removing and replacing switches to avoid breaking them.

11. Unsolder function motor leads—observe polarity for replacing.
12. Remove three (3) posi-drive (+ head) screws (Fig. 15).
13. Lift guide rail assembly to about a 45° angle. Move guide rail assembly toward rear of player unseating one side at a time, and lift straight up to remove from mounting brackets molded into player baseplate. (see Note) Guide rail assembly is now free to be removed from player.

NOTE: For ease in removal use slight pressure to unseat each side individually, Guide Rail assembly snaps into base plate mountings.

14. To reassemble—reverse procedure.

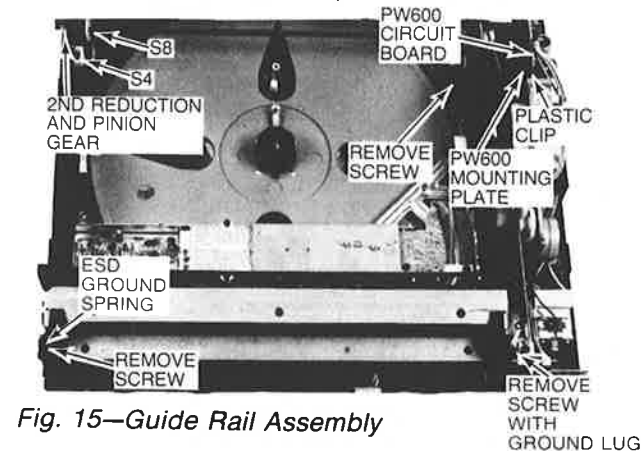


Fig. 15—Guide Rail Assembly

## Guide Rail Assembly Disassembly

1. With guide rail assembly removed from player—remove retaining rings from function gear and receiver actuator (Fig. 17).
2. Release front receiver activating rod (Fig. 17) held captive by plastic tab on right rail assembly.
3. Pull both the function gear and receiver actuator away from rail assembly slightly. Push function gear

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## INSTRUMENT DISASSEMBLY (continued)

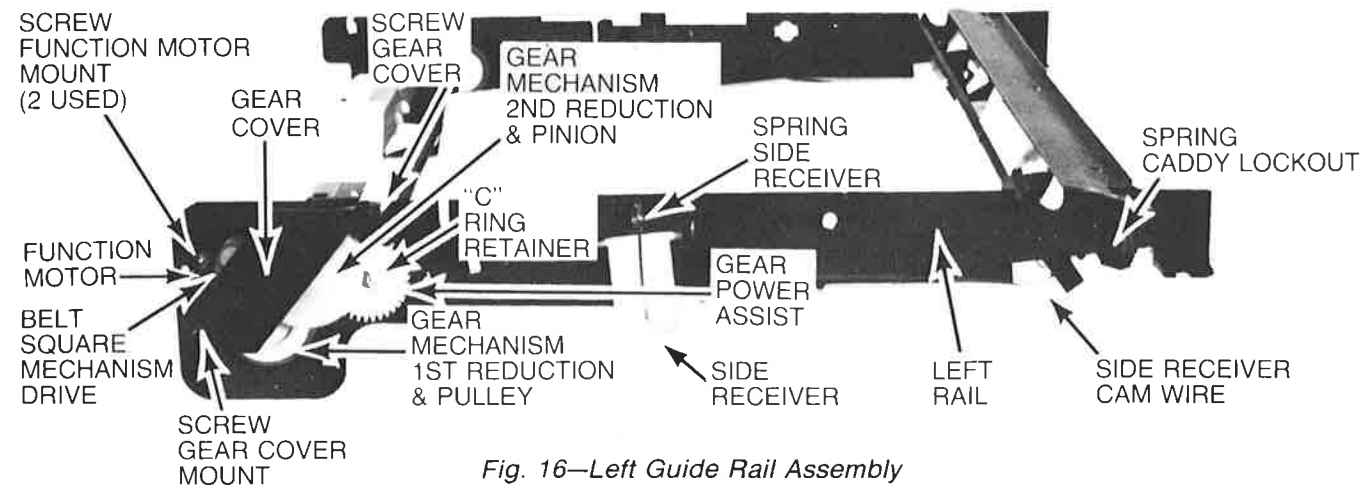


Fig. 16—Left Guide Rail Assembly

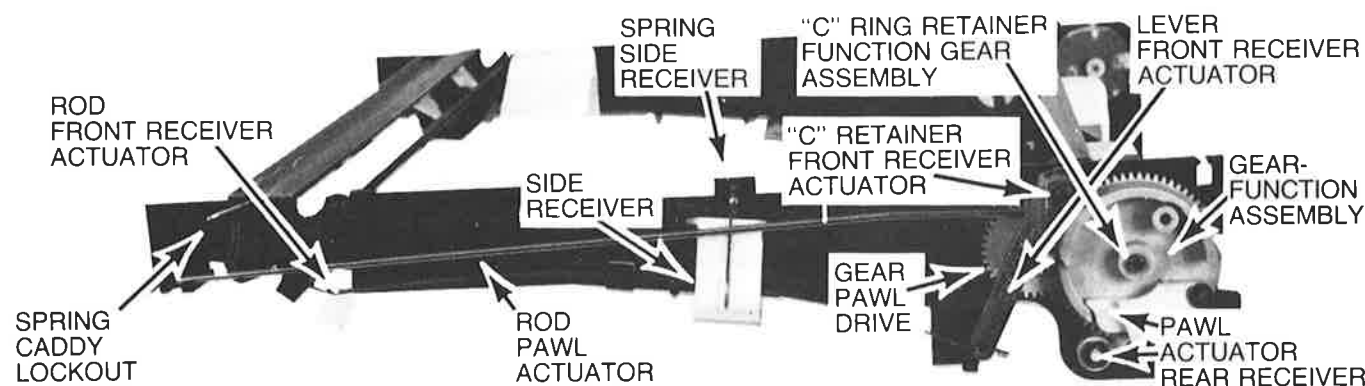


Fig. 17—Right Guide Rail Assembly

pawl out of the way and position function gear to clear receiver actuator. Remove function gear and then the receiver actuator.

4. Remove side receivers (one each side)—release spring and rotate receiver to 45° angle. Slide receiver toward front of rail assembly and remove from rear mounting bracket by angling rear of receiver away from rail, slide receiver toward rear of rail assembly to complete removal.
5. Remove receiver actuator rod (Fig. 17) from right rail assembly and side receiver wire cam (Fig. 16) from left rail.
6. Remove retaining ring holding pawl drive gear (Fig. 17) captive—remove pawl drive gear.
7. Remove retaining ring holding the power assist gear (Fig. 17) captive. Remove power assist gear.
8. Remove lock out springs (Figs. 16 & 17) right and left sides. Remove caddy lockouts (Figs. 16 & 17).
9. To separate the Left and Right rail assemblies the cabinet support bracket (Fig. 18) and the pivot support bracket (Fig. 18) must be removed.
10. Use small blade screwdriver (approximately 1/8")—slip between plastic overlap of rail assembly and top of cabinet support bracket and pry up to remove bracket. Repeat same procedure at rear of pivot support bracket.

**CAUTION:** Some pressure must be exerted during this procedure, however care must be taken to avoid breaking plastic rail.

NOTE: Brackets simply snap into place during replacement.

11. Remove spacer (Item 52, Fig. 47) from right rail assembly (holds spine hold down assembly in place on right rail assembly). Remove spine hold down assembly (Item 53, Fig. 47).
12. Remove power assist hub assembly (Item 32, Fig. 47) and front receiver pad assembly (Item 51, Fig. 47).
13. To reassemble—reverse procedure.

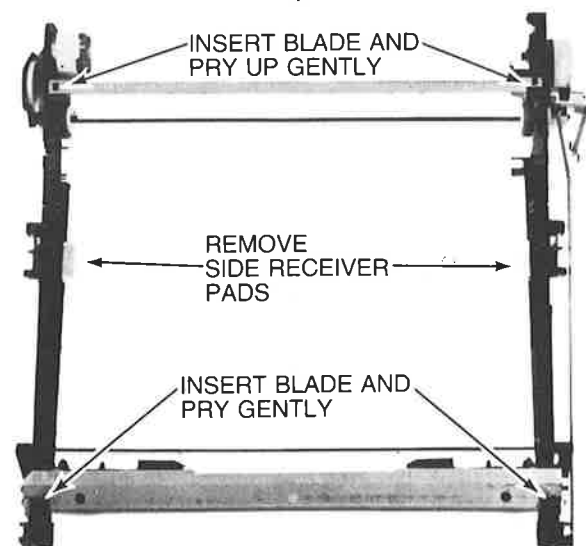


Fig. 18—Guide Rail Assembly

## INSTRUMENT DISASSEMBLY (continued)

## Rear Receiver Pad Assembly Removal

1. With guide rail assembly and turntable removed—release tension on rear receiver pad assembly torsion spring (Fig. 19) and remove wires to switch S8 from wire guide stud. Move switch and wire out of the way.
2. Lift rear receiver pad assembly (Fig. 19) straight up and remove from baseplate.
3. To replace—reverse procedure.

NOTE: Before replacing rear receiver pad assembly in position apply one (1) full turn of tension to torsion spring.

## Caddy Defeat and Spine Latch Assembly Removal

1. With guide rail assembly removed—release caddy defeat springs (Fig. 19) from baseplate studs.
2. Remove spacer clip (Fig. 19) from caddy defeat and spine latch assembly.
3. Slide caddy defeat and spine latch assembly (Fig. 19) to right—raise left side of assembly to clear mounting stud and slide assembly to left to remove.
4. To replace—reverse procedure.

## Disc Transfer Rod Removal

1. With Guide Rail, Rear Receiver Pad and Caddy Defeat/Spine Latch assemblies removed—release Transfer Rod spring (Fig. 19) from baseplate stud.
2. Rotate Transfer Rod (Fig. 19) upward to clear center portion of baseplate.
3. Move Transfer Rod to the left to clear far right mounting stud. Rotate rod toward rear of player to clear next mounting stud and continue moving rod to the left.
4. After the first large mounting stud has been cleared by transfer rod, guide left portion of rod up and toward rear of player. Drop right portion of rod into trough molded into baseplate.
5. Using an upward arcing motion continue moving rod

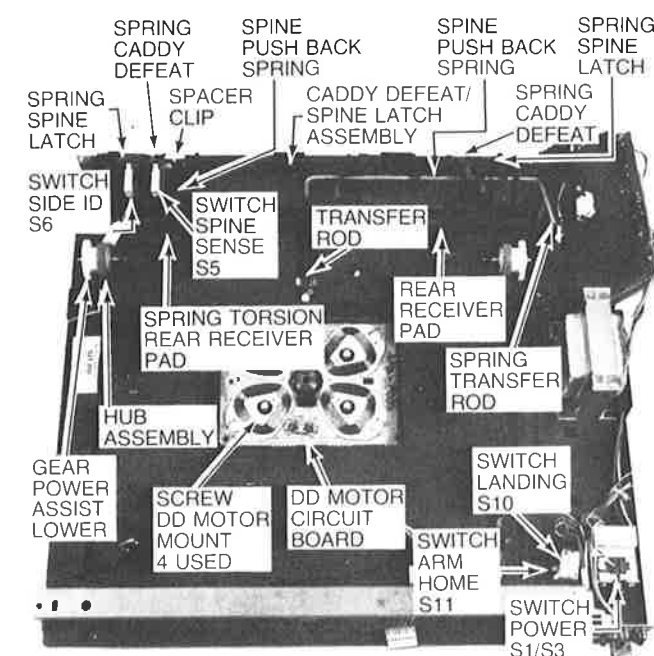


Fig. 19—Miscellaneous Disassembly

until it can easily be lifted up and out of the center baseplate mounting studs.

6. To replace—reverse procedure.

NOTE: No force is required to remove or replace the disc Transfer Rod.

## Turntable Removal

1. With cabinet top, receiver spindle assembly and guide rail bracket removed—use thumb to rotate mechanism drive 2nd reduction gear (Fig. 16) in direction necessary to place mechanism in "PLAY" mode while holding AC switch (S2) actuator (Item 47, Fig. 47) back out of the way.
2. Rotate turntable to center solid portion of turntable over transfer rod (two holes in turn-table at 45° angle with respect to rear edge of player).
3. Lift up on turntable and angle front edge of turntable to clear front receiver pad and remove turntable from player on an angle.
4. To replace—reverse procedure.

NOTE: When replacing turntable—be certain to check magnet and turntable well for debris.

**CAUTION:** There is a thrust plate (Item 102, Fig. 48) used in the turntable bearing. Be sure that it is in place before replacing turntable. Do not turn player upside down during servicing without turntable in place, it could result in possible loss of the thrust plate.

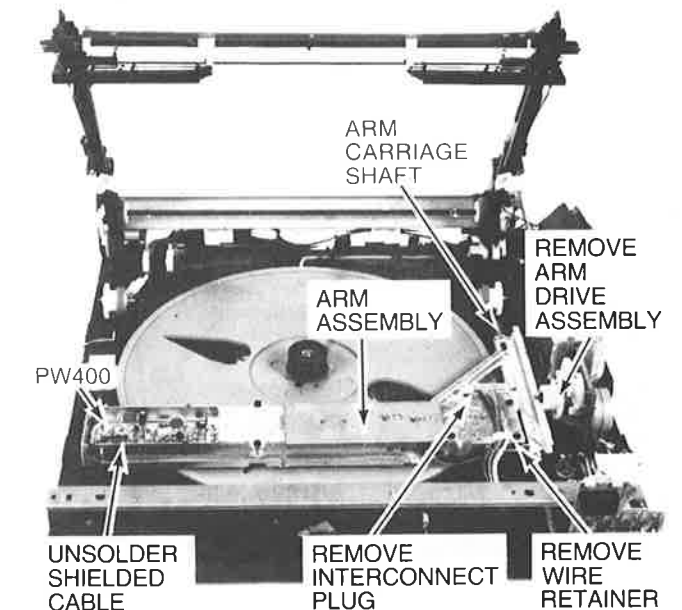


Fig. 20—Turntable and Arm Assembly

## Arm Assembly Removal

1. With cabinet top, cabinet front and receiver spindle removed—remove cabinet support bracket ESD ground spring from left front corner.
2. Remove ground clips from guide rail bracket and pivot support bracket. Remove stylus cartridge from arm assembly and store in safe place.
3. Remove Arm Drive Assembly from baseplate and move to the side out of the way.
4. Remove three (3) posi-drive (+ head) screws holding

Continued on next page

# INSTRUMENT DISASSEMBLY (continued)

guide rail assembly and lift assembly to 45° angle. (Fig. 20).

5. Unsolder shielded AO cable from PW 400, arm preamp circuit board. Remove cable strap and P 101 from arm interconnect circuit board.
6. Lift Arm Carriage Shaft (Fig. 20) from its rear baseplate mounting and pull it loose from its front baseplate mounting.
7. Remove Arm assembly from player.
8. To replace—reverse procedure.

## PW 200 Resonator Removal

1. Remove stylus cartridge and store in safe place.
2. Remove two (2) posi-drive (+ head) screws holding resonator captive and remove stylus cover latch spring (Fig. 21).
3. Unsolder three (3) wires connected to feed-thru studs on resonator.
4. Lift resonator up to remove from Arm Assembly.
5. To replace—reverse procedure.

## Lifter Actuator Assembly Removal

1. Remove cartridge cover and stylus cartridge. Place stylus cartridge in safe place.
2. Remove two (2) lifter pivot retaining clips—one (1) each side of arm assembly (Fig. 21).
3. Remove Lifter Actuator assembly.

4. To replace—reverse procedure.

## Armstretcher Coil Removal

1. Remove arm assembly from player and place on solid flat surface.
2. With Lifter Actuator removed — unsolder leads from Armstretcher Coil (observe polarity).
3. Break push on retainers and remove Armstretcher coil.
4. To replace, reverse procedure (new push on retainers required).

NOTE: See Arm Assembly schematic for Armstretcher Coil basing.

## Kicker Coil Replacement

1. Remove arm assembly from player and place on solid flat surface.
2. With Lifter Actuator removed — unsolder leads from Kicker Coil (observe polarity).
3. Break push on retainers and remove kicker coil assembly.
4. To replace, reverse procedure (new push on retainers required).

NOTE: See Arm assembly schematic for Kicker Coil basing.

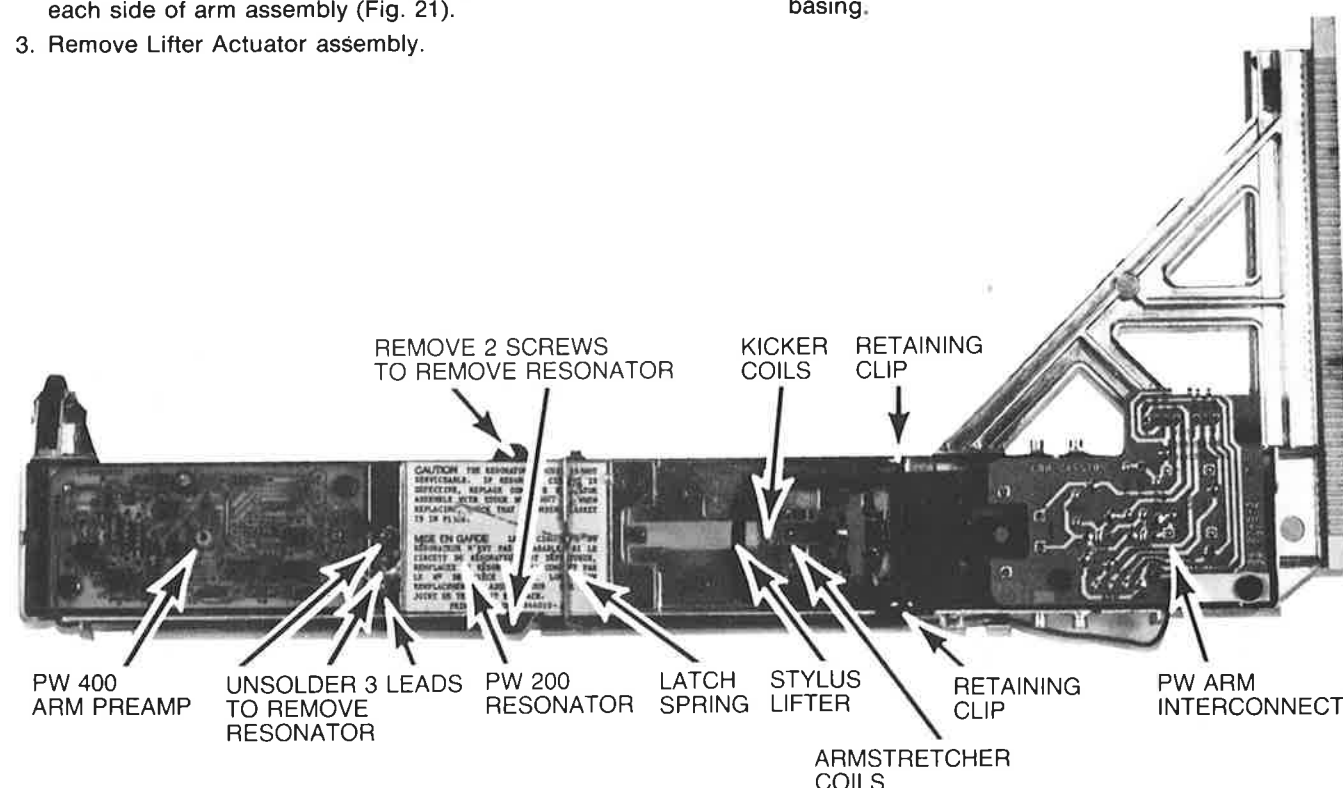


Fig. 21—Arm Assembly SJT 100/200

# FIELD SERVICE ALIGNMENT PROCEDURES

## Test Equipment Required:

### Digital Voltmeter

### Oscilloscope

### Frequency Counter

### VideoDisc

### Color TV Receiver

### Marker Generator

### Alignment Tools

## Specifications

Range: .1V DC to 30V DC  
Accuracy:  $\pm 1\%$

Triggered  
Response: DC — 20 MHz.  
Sensitivity: 5mV/cm  
Maximum Sweep Rate .1 $\mu$ S/cm

Range: 50 Hz to 100 MHz.  
Sensitivity: 25mV to 5V

Stereo Alignment Disc: See Replacement Parts List for Stock No.

Standard NTSC

Range: Crystal Calibrated from 19 to 262 MHz.

2.5mm non-metallic female  
Hex Head adjustment tool  
(see replacement parts list for Stock No.)  
.056" square end tool GC9440 or equivalent  
.100" hex end tool GC8606 or equivalent  
insulated blade tool GC8722 or equivalent

## ELECTRICAL ADJUSTMENTS

NOTE: Use only the Stereo Alignment (TEST) Disc (see replacement parts list for stock no.) to perform the following adjustments.

### 5V Reference Adjust R2020

1. Apply power to player and place in "Load" mode.
2. Connect DC Voltmeter to TP 2003 (Fig. 26).
3. Adjust R2020 for 5.0V DC  $\pm$  .05V DC (Fig. 27).

### 3.58 MHz Reference Oscillator Adjust

1. Connect frequency counter via X10 probe (see note) to TP 3406 (Fig. 26).
2. With player in "Load" mode adjust C5902 for 3.579545  $\pm$  10 Hz (Fig. 27).

NOTE: Typical capacity of X10 probe and counter is approximately 20-25pf. A X1 probe (typical capacity of approximately 100pf) may be used with a 33pf capacitor placed in series with probe.

### NLAC (DC Balance) Adjust (R3131)

1. Place player in "Pause" mode.
2. Connect DC Voltmeter to TP 3101 (Fig. 26).
3. Adjust R3131 to produce a 10.5  $\pm$  0.5 V.D.C. reading (Fig. 27).

### Video Demodulator VCO Adjust (C3215)

1. Apply power to player.
2. Disconnect interconnect plug P4 (A0).
3. Short the two pins of J4 together.
4. Connect frequency counter via X10 probe (see note) to TP 3102 (Fig. 26).
5. Adjust C3215 for 5.25 MHz  $\pm$  50 KHz (Fig. 27).
6. Remove short from the two pins of J4 and reconnect P4.

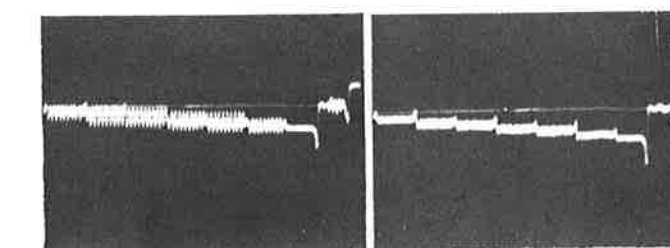
NOTE: Typical capacity of X10 probe and counter is approximately 20-25pf. A X1 probe (typical capacity of 100 pf) may be used with a 33pf capacitor placed in series with probe. This will place a load on the VCO of approximately 25pf.

### Video Level Adjust (R3202)

1. Place player in "Play" mode.
2. Use stereo alignment disc 100 IRE white field signal (Segment E).
3. Connect oscilloscope to TP 3410 (Fig. 26).
4. Adjust R3202 (video level adjust) to produce 2.8Vp-p response at TP 3410 (Fig. 27).

### Luminance Channel Null Adjust R3328

1. Place player in "Play" mode.
2. Use stereo alignment disc color bar signal (Segment D).
3. Connect oscilloscope to TP 3302 (Fig. 26).
4. Adjust R3328 for minimum (null) chroma information. See Figs. 22 & 27.



INCORRECT

CORRECT

Fig. 22—Luminance Null



ELECTRICAL ADJUSTMENTS (continued)

Chroma Channel Null Adjust R3329

- 1. Place player in "Play" mode.
- 2. Use stereo alignment disc color bar signal (Segment D).
- 3. Connect oscilloscope to TP 3303 (Fig. 26).
- 4. Adjust R3329 for minimum p-p signal see Figs. 23 & 27.

NOTE: Repeat Video Level Adjustment after completion of Luminance Channel Null and Chroma Channel Null adjustments.

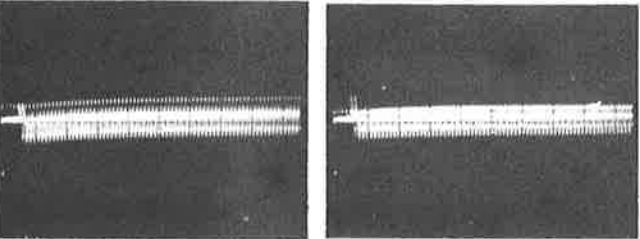


Fig. 23—Chroma Null

Chroma Level Adjust R3312

- 1. Place player in "Play" mode.
- 2. Use stereo alignment disc color bar signal (Segment D).
- 3. Connect oscilloscope to TP 3410 (Fig. 26).
- 4. Adjust R3312 so that the p-p level of color reference burst is 1V p-p see Figs. 24 & 27.

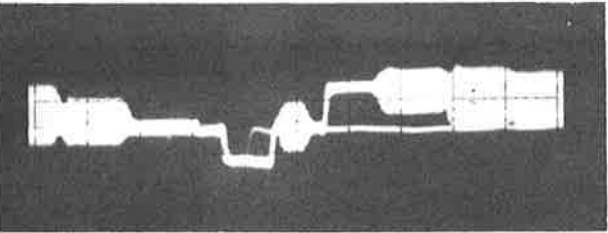


Fig. 24—Chroma Level

Vertical Detail Level Adjust R3317

- 1. Place player in "Play" mode.
- 2. Use stereo alignment disc color bar signal (Segment D).
- 3. Connect oscilloscope to TP 3404 (Fig. 26).
- 4. Adjust R3317 so that the pulse level matches before and after transition from vertical equalizing pulses to vertical sync pulses see Figs. 25 & 27.

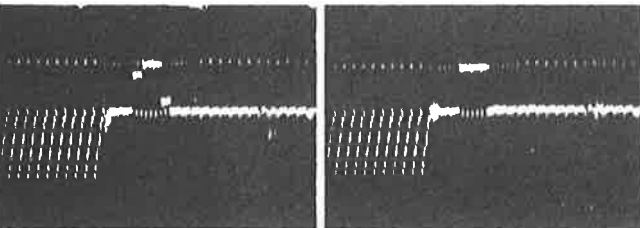


Fig. 25—Vertical Detail Level

Defect Substitution Level (Delayed Video) Adjust R3304

- 1. Place player in "Play" mode.
- 2. Use stereo alignment disc 5 step linearity with defect (Segment I).
- 3. Connect disc player to TV set. Locate defect (Line No. 130) by rotating R3304 to one end of rotation (Fig. 27).
- 4. Adjust R3304 for proper substitution to make defect disappear (adjust for best picture).

VCXO Adjust

- 1. Place player in "Pause" mode.
- 2. Apply +5V to U3402 Pin 1.
- 3. Connect DVM from TP 3402 to ground (Fig. 26).
- 4. Connect 4.7 MΩ resistor from TP 3412 (U3401 Pin 6) to +15V DC source and record voltage V1 measured on DVM at TP 3402 (Fig. 26).
- 5. Remove 4.7 MΩ resistor end from +15V source and connect it to ground.
- 6. Record voltage measured on DVM as V2. Remove grounded end of 4.7 MΩ resistor, leave one end connected to TP 3412 (Fig. 26).
- 7. Using the formula  $\Delta F = 3/2 (V1 - V2 - .177) \text{ kHz}$ , calculate  $\Delta F$ . (The result should be between 1.90 and 2.52 kHz.)

Example:  $\Delta F = 3/2 (8.66V - 7.09V - .177) \text{ kHz}$   
 $\Delta F = 3/2 (1.393) \text{ kHz}$   
 $\Delta F = 1.5 \times 1.393 \text{ kHz}$   
 $\Delta F = 2.09 \text{ kHz}$

NOTE: The voltages shown in solving the formula to determine  $\Delta F$  are example voltages — actual measured voltages (V1 & V2) will have to be substituted.

- 8. Calculate high frequency limit  $fH = 1535.625 + \Delta F \text{ kHz}$

Example:  $fH = 1535.625 \text{ kHz} + 2.09 \text{ kHz}$

- 9. Calculate low frequency limit.  $fL = 1535.625 - \Delta F \text{ kHz}$

Example:  $fL = 1535.625 \text{ kHz} - 2.09 \text{ kHz}$

- 10. Connect frequency counter via X10 probe to TP 3407.

NOTE: Typical capacity of X10 probe is approximately 20-25 pf. A X1 probe (typical capacity of approximately 100 pf) may be used with a 33 pf capacitor if placed in series with probe.

- 11. Remove +5V from U3402 Pin 1.
- 12. Adjust L3403 for  $1.534091 \pm 100 \text{ Hz}$  (Fig. 27).

CAUTION: 4.7 MΩ resistor must be open at one end to make this adjustment.

- 13. Connect 4.7 MΩ resistor from TP 3412 to +15V source. With player in "Play" mode, release pause mode. Frequency indicated on frequency meter should be  $\pm 100 \text{ Hz}$  of previously calculated  $fH$  (EXAMPLE:  $1537.715 \text{ kHz} \pm 100 \text{ Hz}$ ). If not, adjust R3412 to achieve the previously calculated  $fH$ .

- 14. Remove 4.7 MΩ resistor from +15V source and place player in "Pause" mode. Check that frequency on fre-

Continued on next page

ELECTRICAL ADJUSTMENTS (continued)

quency meter is  $1.534091 \pm 100 \text{ Hz}$ . If not, adjust L3403.

- 15. Connect 4.7 MΩ resistor from TP 3412 to ground. With player in "Play" mode, release "Pause" mode. Frequency indicated on frequency counter should be  $\pm 100 \text{ Hz}$  of previously calculated  $fL$  (Example:  $1533.445 \text{ kHz} \pm 100 \text{ Hz}$ ). If not, adjust L3402 to remove approximately 1/2 of the frequency error and adjust R3412 to remove the remainder.
- 16. Repeat Steps 13-16 until limits of each are met.
- 17. Remove 4.7 MΩ resistor from TP 3412.

Phase Detector Gain Adjust R3419

- 1. Use stereo alignment disc—any signal, place player in "Play" mode.
- 2. Connect oscilloscope to TP 3408 (Fig. 26).
- 3. Short TP 3401 to TP 3403 with a clip lead. Short TP 3402 to TP 3403 with a clip lead.
- 4. Adjust R3419 for 3V p-p waveform at TP 3408 (Fig. 27).
- 5. Remove shorting clip leads from TP 3401 and TP 3402 to TP 3403.

Audio Demodulator VCO Adjust (716 kHz) (R4111)

- 1. Place player in "Load" mode.
- 2. Disconnect interconnect plug P4 (AO).
- 3. Short the two pins of J4 together.
- 4. Connect frequency counter via X10 probe (see note) to TP 4008 (Fig. 26).
- 5. Adjust R4111 for  $716 \text{ kHz} \pm 2 \text{ kHz}$  (Fig. 27).
- 6. Remove frequency counter and remove short from the two pins of J4. Reconnect P4.

NOTE: Typical capacity of X10 probe and counter is approximately 20-25 pf. A X1 probe (typical capacity of approximately 100 pf) may be used with a 33 pf capacitor placed in series with probe. This will place a load on the VCO of approximately 25 pf.

Audio Demodulator VCO Adjust (905 kHz) (R4112)

- 1. Place player in "Load" mode.
- 2. Disconnect interconnect plug P4 (AO).
- 3. Short the two pins of J4 together.
- 4. Connect frequency counter via X10 probe (see note) to TP 4009 (Fig. 26).
- 5. Adjust R4112 for  $905 \text{ kHz} \pm 2 \text{ kHz}$  (Fig. 27).
- 6. Remove frequency counter and remove short from the two pins of J4. Reconnect P4.

NOTE: Typical capacity of X10 probe and counter is approximately 20-25 pf. A X1 probe (typical capacity of approximately 100 pf) may be used with a 33 pf capacitor placed in series with probe. This will place a load on the VCO of approximately 25 pf.

(L + R) Level Adjust (R4127)

- 1. Place player in "Play" mode.
- 2. Connect oscilloscope to J4602 (R OUT) Fig. 26.
- 3. Ground TP 5102.

- 4. Use stereo alignment disc Segment G (S1: 1020 Hz 50% S2: 1020 Hz 50% out of phase)
- 5. Adjust R4127 (Fig. 27) to produce  $560 \pm 20 \text{ mV p-p}$  audio signal at J4602 (R OUT).
- 6. Remove ground from TP 5102.

(L-R) Level Adjust (R4128)

- 1. Place player in "Play" mode.
- 2. Connect oscilloscope to J4602 (R OUT) (Fig. 26).
- 3. Use stereo alignment disc Segment G. (S1: 1020 Hz 50% S2: 1020 Hz 50% out of phase).
- 4. Adjust R4128 (Fig. 27) to produce a minimum (null) V p-p at J4602 (R OUT).

TV Audio Level Adjust (R4303)

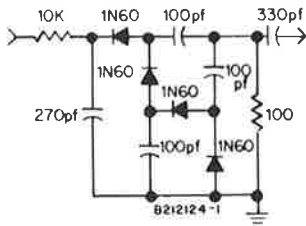
- 1. Place player in "Play" mode.
- 2. Use stereo alignment disc Segment C (S1: 1020 Hz 100%).
- 3. Connect oscilloscope to TP 3504 (Fig. 26).
- 4. Adjust R4303 (Fig. 27) to produce 1.2V p-p audio signal at TP 3504.

R. F. Output Channel Oscillator Adjust L3501, L3502

- 1. With player in "Load" mode, place Channel Switch, S3501, in Channel 3 position. Connect player to TV or 75 ohm load.
- 2. Connect marker generator (RF input) to TP 3501 and adjust for 61.25 MHz output, Fig. 26.
- 3. Adjust L3501 for zero beat (Fig. 27).
- 4. Place Channel Switch, S3501, in Channel 4 position.
- 5. Connect marker generator (RF input) to TP 3503 and adjust for 67.25 MHz output.
- 6. Adjust L3502 for zero beat (Fig. 27).

RF Modulator Lower Sideband Trap Adjust L3504, L3503 (Early production instruments only)

- 1. Turn player power "Off" and connect marker generator output to TP 3501 Fig. 26 marker generator set at 56.75 MHz.
- 2. Connect quadrupler detector to J3502. Connect oscilloscope (or D. C. Voltmeter) to quadrupler detector and set oscilloscope on DC @ 10 mV/Div.



QUADRUPLER DETECTOR

- 3. Adjust L3504 (Fig. 27) for null (minimum deflection).
- 4. Connect marker generator output to TP 3502, marker generator set at 62.75 MHz.
- 5. Adjust L3503 (Fig. 27) for null (minimum deflection).

NOTE: Do not adjust RF Bandpass Coils L3506 and L3507.

ELECTRICAL ADJUSTMENTS (continued)

4.5 MHz Oscillator Adjust L3509

- 1. Connect player to TV, player in "Load" mode.
- 2. Monitor a suitable point in TV IF to pick up 4.5 MHz sound carrier with a frequency counter.
- 3. Adjust L3509 (Fig. 27) for 4.5 MHz  $\pm$  1 kHz.

Video Modulation Depth Adjust R3402

- 1. Connect player to TV, player in "Play" mode.
- 2. Use stereo alignment disc 120 IRE white field signal (Segment H).

- 3. Adjust R3402 (Fig. 27) clockwise till a buzz is heard in TV audio, then turn counterclockwise to just eliminate the buzz.

Audio Modulation Depth Adjust R4303

- 1. Place player in "Play" mode.
- 2. Use stereo alignment disc, uniform motion on grey field, S1: 1020 Hz 100% (Segment C).
- 3. Connect oscilloscope to TP 3504 Fig. 26.
- 4. Adjust R4303 (Fig. 27) for 1.2 V p-p at TP 3504.

I C VOLTAGE CHARTS

U5101 Player Control  $\mu$ C

Pin No.	Load	Play	Pause	Unload
1	GND	GND	GND	GND
2	+2.39V	+2.39V	+2.39V	+2.39V
3	+4.86V	+4.86V	+4.86V	+4.86V
4	+4.88V	+4.56V	0V	0V
5	N.C.	N.C.	N.C.	N.C.
6	N.C.	N.C.	N.C.	N.C.
7	+4.81V	+4.81V	+4.81V	+4.81V
8	+4.88V	+4.88V	+4.88V	+4.88V
9	+0.06V	+4.93V	+0.06V	+0.06V
10	+0.06V	+4.93V	+0.06V	+0.06V
11	+4.66V	+4.66V	+4.66V	+4.66V
12	+0.72V	+0.09V	+0.72V	+0.72V
13	See Note 1	See Note 1	See Note 1	See Note 1
14	See Note 1	See Note 1	See Note 1	See Note 1
15	See Note 1	See Note 1	See Note 1	See Note 1
16	See Note 1	See Note 1	See Note 1	See Note 1
17	See Note 1	See Note 1	See Note 1	See Note 1
18	See Note 1	See Note 1	See Note 1	See Note 1
19	See Note 1	See Note 1	See Note 1	See Note 1
20	See Note 4	See Note 4	See Note 4	See Note 4
21	Gnd	Gnd	Gnd	Gnd
22	See Note 4	See Note 4	See Note 4	See Note 4
23	See Note 4	See Note 4	See Note 4	See Note 4
24	See Note 4	See Note 4	See Note 4	See Note 4
25	+4.81V	+4.81V	+4.81V	+4.81V
26	See Note 2	See Note 2	See Note 2	See Note 2
27	See Note 2	See Note 2	See Note 2	See Note 2
28	0V	+4.89V	0V	0V
29	0V	+4.85V	+4.85V	+4.85V
30	See Note 4	See Note 4	See Note 4	See Note 4
31	+0.10V	+0.10V	+0.10V	+0.10V
32	+4.83V	+0.10V	+0.10V	+4.83V
33	0V	+4.84V	+4.84V	+4.84V
34	+0.70V	+0.70V	+0.70V	+0.70V
35	+3.55V	+3.55V	+3.55V	+3.55V
36	0V	+4.87V	+4.87V	+4.87V
37	+4.87V	See Note 3	+4.87V	+4.87V
38	+4.76V	See Note 3	+4.76V	+4.76V
39	+4.76V	See Note 3	+4.76V	+4.76V
40	+4.76V	See Note 3	+4.76V	+4.76V
41	+4.76V	See Note 3	+4.76V	+4.76V
42	+4.87V	+4.87V	+4.87V	+4.87V

N.C.—No Connection

Note 1. Voltage variable—depending upon which element of digital display is illuminated.

U 5102 Daxi Buffer  $\mu$ P

Pin No.	Load	Play	Pause	Unload
1	+2.69V	+2.69V	+2.69V	+2.69V
2	N.C.	N.C.	N.C.	N.C.
3	+2.59V	+2.59V	+2.59V	+2.59V
4	+4.81V	+0.35V	+4.81V	+4.81V
5	See Note 4	See Note 4	See Note 4	See Note 4
6	+2.39V	+2.39V	+2.39V	+2.39V
7	Gnd	Gnd	Gnd	Gnd
8	0V	+0.10V	0V	0V
9	N.C.	N.C.	N.C.	N.C.
10	See Note 4	See Note 4	See Note 4	See Note 4
11	See Note 4	See Note 4	See Note 4	See Note 4
12	N.C.	N.C.	N.C.	N.C.
13	0V	+0.10V	0V	0V
14	+4.95V	+4.95V	+4.95V	+4.95V

U5901 Mechanism Control  $\mu$ C

Pin No.	Load	Play	Pause	Unload
1	+2.15V	+2.15V	+2.15V	+2.15V
2	+2.58V	+2.58V	+2.58V	+2.58V
3	+4.87V	+4.87V	+4.87V	+4.87V
4	+4.90V	See Note 4	See Note 4	See Note 4
5	+4.90V	See Note 5	See Note 5	See Note 5
6	+0.70V	+0.70V	+0.70V	+0.70V
7	+0.70V	+0.70V	+0.70V	+0.70V
8	+4.84V	+4.68V	+4.68V	+4.84V
9	+4.84V	+4.68V	+4.68V	+4.84V
10	+4.84V	+4.68V	+4.68V	+4.84V
11	+4.84V	+4.68V	+4.68V	+4.84V
12	0V	+4.84V	+4.84V	+4.84V
13	N.C.	N.C.	N.C.	N.C.
14	Gnd	Gnd	Gnd	Gnd
15	N.C.	N.C.	N.C.	N.C.
16	N.C.	N.C.	N.C.	N.C.
17	+4.84V	+0.10V	+0.10V	+4.84V
18	+0.10V	+0.10V	+0.10V	+0.10V

N.C.—No Connection

Note 2. Voltage variable stepper motor control pulses.

Note 3. Voltage controlled by front panel function switches (5600 series). Normally high—momentary low when corresponding function switch is depressed.

IC VOLTAGE CHARTS (continued)

U5901 Mechanism Control  $\mu$ C (continued)

Pin No.	Load	Play	Pause	Unload
19	+4.84V	+4.84V	+4.84V	+4.84V
20	+4.84V	+4.84V	+4.84V	+4.84V
21	+0.10V	+2.50V	+2.50V	+0.10V
22	+0.10V	+2.50V	+2.50V	+0.10V
23	0V	+4.85V	+4.85V	+4.85V
24	+4.78V	+4.87V	+4.78V	+4.78V
25	+4.78V	0V	0V	0V
26	+4.89V	+4.89V	+4.89V	+4.89V
27	See Note 5	See Note 5	See Note 5	See Note 5
28	+4.89V	+4.89V	+4.89V	+4.89V

U5902 T.T. Motor Control I.C.

Pin No.	Load	Play	Pause	Unload
1	+0.26V	+0.34V	+0.34V	+0.26V
2	+0.58V	+0.58V	+0.58V	+0.58V
3	+0.58V	+0.58V	+0.58V	+0.58V
4	+4.89V	+4.89V	+4.89V	+4.89V
5	+0.58V	+0.58V	+0.58V	+0.58V
6	+0.58V	+0.58V	+0.58V	+0.58V
7	+0.24V	+0.32V	+0.32V	+0.24V
8	+0.24V	+0.32V	+0.32V	+0.24V
9	+0.58V	+0.58V	+0.58V	+0.58V
10	+0.58V	+0.58V	+0.58V	+0.58V
11	Gnd	Gnd	Gnd	Gnd
12	+0.58V	+0.58V	+0.58V	+0.58V
13	+0.58V	+0.58V	+0.58V	+0.58V
14	+0.26V	+0.34V	+0.34V	+0.26V

U2001 Power Supply IC

Pin No.	Load	Play	Pause	Unload
1	+5.15V	—	—	—
2	+0.89V	—	—	—
3	+0.89V	—	—	—
4	+22.4V	—	—	—
5	+4.90V	—	—	—
6	+4.90V	—	—	—
7	+12.8V	—	—	—
8	+3.18V	—	—	—
9	+4.90V	—	—	—
10	+4.90V	—	—	—
11	Gnd	—	—	—
12	+4.90V	—	—	—
13	+4.90V	—	—	—
14	+11.5V	—	—	—

U2501 Pulse Interference Corrector (PIC) IC

Pin No.	Load	Play	Pause	Unload
1	+5.40V	+6.87V	+6.87V	+5.40V
2	+3.64V	+3.64V	+3.64V	+3.64V
3	N.C.	N.C.	N.C.	N.C.

Note 4. Digital pulse see schematic waveform.

U2501 Pulse Interference Corrector (PIC) IC (continued)

Pin No.	Load	Play	Pause	Unload
4	+1.47V	+1.47V	+1.47V	+1.47V
5	+1.47V	+1.47V	+1.47V	+1.47V
6	+1.47V	+1.47V	+1.47V	+1.47V
7	Gnd	Gnd	Gnd	Gnd
8	Gnd	Gnd	Gnd	Gnd
9	N.C.	N.C.	N.C.	N.C.
10	N.C.	N.C.	N.C.	N.C.
11	N.C.	N.C.	N.C.	N.C.
12	+3.64V	+3.64V	+3.64V	+3.64V
13	+11.6V	+11.6V	+11.6V	+11.6V
14	+6.15V	+7.57V	+7.57V	+6.15V

U3101 Sync Detector IC (NLAC)

Pin No.	Load	Play	Pause	Unload
1	+4.69V	+4.77V	+4.69V	+4.69V
2	+3.53V	+3.47V	+3.47V	+3.47V
3	Gnd	Gnd	Gnd	Gnd
4	+1.42V	+1.42V	+1.42V	+1.42V
5	+1.42V	+1.42V	+1.42V	+1.42V
6	+1.42V	+1.42V	+1.42V	+1.42V
7	Gnd	Gnd	Gnd	Gnd
8	Gnd	Gnd	Gnd	Gnd
9	N.C.	N.C.	N.C.	N.C.
10	N.C.	N.C.	N.C.	N.C.
11	N.C.	N.C.	N.C.	N.C.
12	+3.53V	+3.47V	+3.47V	+3.47V
13	+10.3V	+10.3V	+10.3V	+10.3V
14	+5.36V	+5.36V	+5.36V	+5.36V

U3201 Video FM Demod IC

Pin No.	Load	Play	Pause	Unload
1	+3.10V	+3.10V	+3.10V	+3.10V
2	+3.10V	+3.10V	+3.10V	+3.10V
3	+3.10V	+3.10V	+3.10V	+3.10V
4	Gnd	Gnd	Gnd	Gnd
5	+6.90V	+6.98V	+6.98V	+6.90V
6	+6.90V	+6.84V	+6.84V	+6.90V
7	+6.24V	+6.32V	+6.32V	+6.24V
8	+0.45V	+4.19V	+1.16V	+0.45V
9	+5.60V	+5.87V	+5.60V	+5.60V
10	+2.10V	0V	0V	+2.10V
11	+5.90V	+6.20V	+5.90V	+5.90V
12	0V	+4.17V	+1.15V	0V
13	+5.75V	+5.82V	+5.82V	+5.75V
14	+11.5V	+11.5V	+11.5V	+11.5V
15	+5.24V	+5.30V	+5.30V	+5.24V
16	+5.24V	+5.30V	+5.30V	+5.24V

Note 5. Voltage dependent on side of disc being played. Side 1 play—voltage high; side 2 play—voltage low



IC VOLTAGE CHARTS (continued)

U3301 ComB Filter/Defect Corrector IC

Pin No.	Load	Play	Pause	Unload
1	+5.05V	+5.05V	+5.05V	+5.05V
2	+5.74V	+5.83V	+5.83J	+5.74V
3	-4.52V	-4.52J	-4.52V	-4.52V
4	+3.89V	+3.89V	+3.89V	+3.89V
5	-4.52V	-4.52V	-4.52V	-4.52V
6	-4.52V	-4.52V	-4.52V	-4.52V
7	-4.52V	-4.52V	-4.52V	-4.52V
8	Gnd	Gnd	Gnd	Gnd
9	+8.86V	+8.86V	+8.86V	+8.86V
10	+3.86V	+3.86V	+3.86V	+3.86V
11	+3.73V	+3.73V	+3.73V	+3.73V
12	+2.57V	+2.57V	+2.57V	+2.57V
13	+2.42V	+2.42V	+2.42V	+2.42V
14	+5.32V	+5.32V	+5.32V	+5.32V
15	+5.18V	+5.18V	+5.18V	+5.18V
16	+14.6V	+14.6V	+14.6V	+14.6V
17	N.C.	N.C.	N.C.	N.C.
18	+5.10V	+5.10V	+5.10V	+5.10V
19	+4.76V	+4.76V	+4.76V	+4.76V
20	+8.50V	+8.50V	+8.50V	+8.50V
21	+7.24V	+7.24V	+7.24V	+7.24V
22	+5.25V	+5.25V	+5.25V	+5.25V

U3401 Armstretcher IC

Pin No.	Load	Play	Pause	Unload
1	+7.97V	+7.97V	+7.24V	+7.97V
2	+7.23V	+7.23V	+7.23V	+7.23V
3	+5.74V	+5.74V	+5.74V	+5.74V
4	+14.6V	+14.6V	+14.6V	+14.6V
5	+7.17V	+7.17V	+7.17V	+7.17V
6	+7.15V	+7.15V	+7.15V	+7.15V
7	+7.65V	+7.65V	+7.65V	+7.65V
8	+6.69V	+6.69V	+6.69V	+6.69V
9	+7.19V	+7.19V	+7.16V	+7.19V
10	+7.16V	+7.16V	+7.16V	+7.16V
11	Gnd	Gnd	Gnd	Gnd
12	+4.89V	+4.89V	+4.89V	+4.89V
13	+4.89V	+4.89V	+4.89V	+4.89V
14	+5.63V	+5.66V	+5.66V	+5.63V

U3402 Video Converter IC

Pin No.	Load	Play	Pause	Unload
1	0V	+4.17V	+1.15V	0V
2	+5.19V	+4.26V	+5.19V	+5.19V
3	+7.17V	+7.17V	+7.17V	+7.17V
4	+3.61V	+3.16V	+3.16V	+3.16V
5	+7.16V	+7.16V	+7.16V	+7.16V
6	+4.44V	+4.44V	+4.44V	+4.44V
7	+2.22V	+2.22V	+2.22V	+2.22V
8	Gnd	Gnd	Gnd	Gnd
9	+3.61V	+3.61V	+3.61V	+3.61V
10	+8.05V	+8.05V	+8.05V	+8.05V
11	+10.5V	+10.5V	+10.5V	+10.5V
12	+7.16V	+7.16V	+7.16V	+7.16V
13	+7.16V	+7.16V	+7.16V	+7.16V
14	+9.42V	+9.42V	+9.42V	+9.42V
15	+9.42V	+9.42V	+9.42V	+9.42V

U3402 Video Converter IC (continued)

Pin No.	Load	Play	Pause	Unload
16	+3.24V	+3.24V	+3.24V	+3.24V
17	+3.24V	+3.24V	+3.24V	+3.24V
18	+7.83V	+7.72V	+7.03V	+7.83V
19	+11.7V	+11.7V	+11.7V	+11.7V
20	+1.86V	+1.86V	+1.86V	+1.86V
21	+6.76V	+5.26V	+6.76V	+6.76V
22	+0.66V	+6.80V	+0.66V	+0.66V
23	+1.07V	+0.26V	+1.07V	+1.07V
24	+7.18V	+7.18V	+7.18V	+7.18V

U3501 RF Modulator IC

Pin No.	Load	Play	Pause	Unload
1	+7.18V	+7.18V	+7.18V	+7.18V
2	+7.18V	+7.18V	+7.18V	+7.18V
3	+7.18V	+7.18V	+7.18V	+7.18V
4	+7.18V	+7.18V	+7.18V	+7.18V
5	Gnd	Gnd	Gnd	Gnd
6	See Note 6	See Note 6	See Note 6	See Note 6
7	See Note 6	See Note 6	See Note 6	See Note 6
8	See Note 7	See Note 7	See Note 7	See Note 7
9	See Note 7	See Note 7	See Note 7	See Note 7
10	+14.5V	+14.5V	+14.5V	+14.5V
11	+14.7V	+14.7V	+14.7V	+14.7V
12	+9.99V	+9.99V	+9.99V	+9.99V
13	+7.21V	+7.21V	+7.21V	+7.21V
14	+14.7V	+14.7V	+14.7V	+14.7V
15	+14.7V	+14.7V	+14.7V	+14.7V
16	+14.7V	+14.7V	+14.7V	+14.7V
17	+14.2V	+14.2V	+14.2V	+14.2V
18	+7.18V	+7.18V	+7.18V	+7.18V

U4101 (L + R) Audio FM Demod IC (716kHz)

Pin No.	Load	Play	Pause	Unload
1	+3.15V	+3.15V	+3.15V	+3.15V
2	+3.15V	+3.15V	+3.15V	+3.15V
3	+3.15V	+3.15V	+3.15V	+3.15V
4	Gnd	Gnd	Gnd	Gnd
5	+6.94V	+6.94V	+6.94V	+6.94V
6	+7.06V	+7.06V	+7.06V	+7.06V
7	+6.30V	+6.30V	+6.30V	+6.30V
8	+4.21V	+4.21V	+4.21V	+4.21V
9	+5.88V	+5.88V	+5.88V	+5.88V
10	Gnd	Gnd	Gnd	Gnd
11	+5.91V	+5.91V	+5.91V	+5.91V
12	+0.85V	+0.85V	+0.85V	+0.75V
13	+2.06V	+5.84V	+5.84V	+2.06V
14	+11.6V	+11.6V	+11.6V	+11.6V
15	+5.30V	+5.30V	+5.30V	+5.30V
16	+5.30V	+5.30V	+5.30V	+5.30V

Note 6. +13.1V channel 3 operation; +1.47V channel 4 operation.

Note 7. +1.47V channel 3 operation; +13.1V channel 4 operation.

IC VOLTAGE CHARTS (continued)

U4102 (L - R) Audio FM Demod IC (905kHz)

Pin No.	Load	Play	Pause	Unload
1	+3.13V	+3.13V	+3.13V	+3.13V
2	+3.13V	+3.13V	+3.13V	+3.13V
3	+3.13V	+3.13V	+3.13V	+3.13V
4	Gnd	Gnd	Gnd	Gnd
5	+6.94V	+6.94V	+6.94V	+6.94V
6	+6.98V	+6.98V	+6.98V	+6.98V
7	+6.28V	+6.28V	+6.28	+6.28V
8	+4.20V	+4.20V	+4.20V	+4.20V
9	+5.86V	+5.86V	+5.86V	+5.86V
10	Gnd	Gnd	Gnd	Gnd
11	+5.88V	+5.88V	+5.88V	+5.88V
12	+0.85V	+0.85V	+0.85V	+0.75V
13	+2.46V	+5.81V	+5.81V	+2.46V
14	+11.6V	+11.6V	+11.6V	+11.6V
15	+5.27V	+5.27V	+5.27V	+5.27V
16	+5.27V	+5.27V	+5.27V	+5.27V

U4200 Track/Hold and Mute (C Mos Switch) IC

Pin No.	Load	Play	Pause	Unload
1	+2.36V	+2.36V	+2.36V	+2.36V
2	+0.95V	+3.88V	+1.43V	+0.95V
3	+6.94V	+6.94V	+6.94V	+6.94V
4	+6.95V	+6.95V	+6.95V	+6.95V
5	+0.59V	+5.61V (1)	+0.59V	+0.59V
6	+0.45V	+5.29V (2)	+0.45V	+0.45V
7	Gnd	Gnd	Gnd	Gnd
8	+7.89V	+7.89V	+7.89V	+7.89V
9	+7.89V	+7.89V	+7.89V	+7.89V
10	+6.92V	+6.92V	+6.92V	+6.92V
11	+6.92V	+6.92V	+6.92V	+6.92V
12	+0.45V	+5.25V (3)	+0.45V	+0.45V
13	0V	0V (4)	0V	0V
14	+9.17V	+8.56V	+9.17V	+9.17V

U4300 Audio Matrix Buffer IC

Pin No.	Load	Play	Pause	Unload
1	+7.91V	+7.91V	+7.91V	+7.91V
2	+7.91V	+7.91V	+7.91V	+7.91V
3	+6.93V	+6.93V	+6.93V	+6.93V
4	+14.7V	+14.7V	+14.7V	+14.7V
5	+7.89V	+7.89V	+7.89V	+7.89V
6	+7.89V	+7.89V	+7.89V	+7.89V
7	+7.87V	+7.87V	+7.87V	+7.87V
8	+9.55V	+9.55V	+9.55V	+9.55V
9	+7.89V	+7.89V	+7.89V	+7.89V
10	+7.89V	+7.89V	+7.89V	+7.89V
11	Gnd	Gnd	Gnd	Gnd
12	+6.94V	+6.94V	+6.94V	+6.94V
13	+7.92V	+7.92V	+7.92V	+7.92V
14	+7.92V	+7.92V	+7.92V	+7.92V

U4400 Decoder Rectifier IC

Pin No.	Load	Play	Pause	Unload
1	+0.98V	+2.32V	+0.98V	+0.98V
2	+1.30V	+1.37V	+1.30V	+1.30V
3	+1.31V	+1.36V	+1.30V	+1.30V
4	+14.7V	+14.7V	+14.7V	+14.7V
5	+1.31V	+1.37V	+1.31V	+1.31V
6	+1.31V	+1.36V	+1.31V	+1.31V
7	+0.98V	+2.28V	+0.98V	+0.98V
8	+1.00V	+0.95V	+1.00V	+1.00V
9	+1.31V	+1.37V	+1.31V	+1.31V
10	+1.31V	+1.36V	+1.31V	+1.31V
11	Gnd	Gnd	Gnd	Gnd
12	+1.31V	+1.36V	+1.31V	+1.31V
13	+1.31V	+1.36V	+1.31V	+1.31V
14	+1.00V	+0.97V	+1.00V	+1.00V

U4500 Decoder Control IC

Pin No.	Load	Play	Pause	Unload
1	+1.93V	See Note 8	+1.74V	+1.93V
2	+1.43V	See Note 8	+1.43V	+1.43V
3	+1.43V	See Note 8	+1.43V	+1.43V
4	+14.7V	+14.7V	+14.7V	+14.7V
5	+1.43V	See Note 8	+1.43V	+1.43V
6	+1.43V	See Note 8	+1.43V	+1.43V
7	+1.99V	See Note 8	+1.99V	+1.99V
8	0V	See Note 8	+2.36V	0V
9	+1.30V	See Note 8	+1.91V	+1.30V
10	+0.62V	See Note 8	+1.89V	+0.62V
11	Gnd	Gnd	Gnd	Gnd
12	+0.95V	+2.32V	+1.43V	+0.95V
13	+1.16V	+2.30V	+1.43V	+1.16V
14	+0.62V	+6.19V	+1.90V	+0.62V

U4600 Audio Output IC

Pin No.	Load	Play	Pause	Unload
1	+0.09V	+1.22V	+1.10V	+0.09V
2	+8.68V	+8.68V	+8.68V	+8.68V
3	+8.07V	+8.07V	+8.07V	+8.07V
4	+8.07V	+8.07V	+8.07V	+8.07V
5	+7.85V	+7.69V	+7.85V	+7.85V
6	Gnd	Gnd	Gnd	Gnd
7	+7.83V	+7.67V	+7.83V	+7.83V
8	+6.64V	+6.49V	+6.64V	+6.64V
9	+6.64V	+6.67V	+6.64V	+6.64V
10	+7.83V	+7.83V	+7.83V	+7.83V
11	+14.6V	+14.6V	+14.6V	+14.6V
12	+7.85V	+7.88V	+7.85V	+7.85V
13	+8.07V	+8.07V	+8.07V	+8.07V
14	+8.07V	+8.07V	+8.07V	+8.07V
15	+8.68V	+8.68V	+8.68V	+8.68V
16	+0.09V	+1.22V	+1.10V	+0.09V

Note 8. Voltage varies when playing stereo VideoDisc due to processing action of time constant network.

TRANSISTOR VOLTAGE CHART

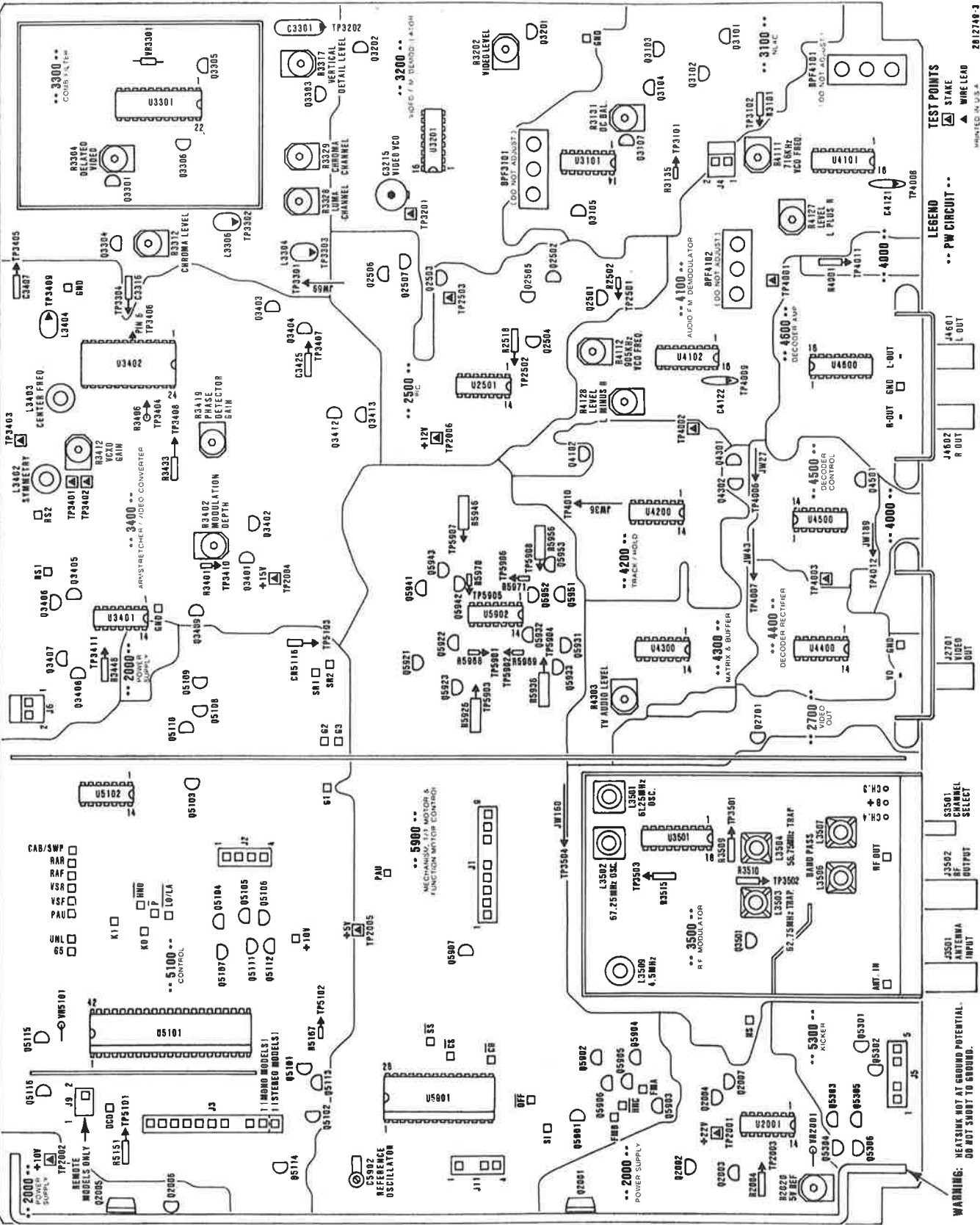
Q401	E	+3.07V	Q2502	E	+0.34V	Q3201	E	+5.62V	Q3407	E	+7.15V
	B	+3.80V		B	+0.90V		B	+6.29V		B	Varies
	C	+7.84V		C	+14.6V		C	+8.52V		C	+14.7V
Q402	E	+7.08V	Q2503	E	Gnd	Q3202	E	+5.51V	Q3408	E	+7.14V
	B	+7.84V		B	+0V		B	+6.17V		B	Varies
	C	+14.4V		C	+5.84V		C	+11.5V		C	Gnd
Q403	E	+1.08V	Q2504	G	+3.42V	Q3301	E	+4.40V	Q3409	E	Gnd
	B	+2.38V		S	+6.42V		B	+5.03V		B	+0.11V
	C	+7.42V		D	+6.64V		C	+14.6V		C	+4.09V
Q404	E	+1.81V	Q2505	E	+11.6V	Q3303	E	+4.50V	Q3412	E	+3.90V
	B	+2.41V		B	+11.1V		B	+5.16V		B	+4.60V
	C	+14.7V		C	+8.73V		C	+14.6V		C	+5.85V
Q405	A	+7.43V	Q2506	E	+5.94V	Q3304	E	+3.88V	Q3413	E	+5.20V
	G	+12.1V		B	+5.52V		B	+4.49V		B	+5.85V
	K	Gnd		C	+0.18V		C	+14.6V		C	+11.5V
Q2001	E	+22.6V	Q2507	E	Gnd	Q3305	E	+5.65V	Q3501	E	+14.7V
	B	+21.9V		B	+0.18V		B	+5.06V		B	+13.9V
	C	+14.7V		C	+0V		C	Gnd		C	+14.6V
Q2002	E	+23.0V	NOT USED SJT 100			Q3306	E	+4.46V	Q4102	E	Gnd
	B	+22.7V	Q2701	E	+6.46V		B	+5.11V		B	+0.65V
	C	+21.9V		B	+7.13V		C	+11.9V		C	+0.02V
				C	+14.7V						
Q2003	E	+2.72V	Q3101	E	+8.83V	Q3401	E	+8.31V	Q4301	E	+7.15V
	B	+3.34V		B	+9.47V		B	+8.98V		B	+7.79V
	C	+21.9V		C	+14.5V		C	+14.6V		C	+14.6V
Q2004	E	+12.1V	Q3102	E	+9.49V	Q3402	E	+3.62V	Q4302	E	+7.15V
	B	+12.7V		B	+8.83V		B	+4.26V		B	+7.79V
	C	+14.1V		C	+4.81V		C	+8.97V		C	+14.6V
Q2005	E	+5.04V	Q3103	E	+4.16V	Q3403	E	+5.61V	Q4501	E	+1.93V
	B	+5.65V		B	+4.82V		B	+6.26V		B	+1.33V
	C	+11.2V		C	+10.3V		C	+9.08V		C	+1.26V
Q2006	E	+4.90V	Q3104	E	+9.60V	Q3404	E	+8.39V	Q5101	E	+3.01V
	B	+5.04V		B	+10.3V		B	+9.04V		B	+4.70V
	C	+5.65V		C	+14.5V		C	+13.9V		C	+2.07V
Q2007	E	+11.9V	Q3105	E	+0.9V	Q3405	E	+7.20V	Q5102	E	+3.01V
	B	+12.1V		B	+1.52V		B	Varies		B	+2.55V
	C	+12.7V		C	+7.72V		C	+14.7V		C	+2.70V
Q2501	E	+6.63V	Q3107	E	+4.72V	Q3406	E	+7.20V	Q5103	E	Gnd
	B	+7.28V		B	+5.28V		B	Varies		B	+0.68V
	C	+12.9V		C	+7.80V		C	Gnd		C	+0.02V

TRANSISTOR VOLTAGE CHART (continued)

Q5104	E	Gnd	Q5115	E	Gnd		NORM	FWD/ RUN		STOP	RUN
	B	Steps Hi-Lo		B	+0.74V				Q5931	E	+23.5V
	C	Steps Hi-Lo		C	+0.02V					B	+23.5V
Q5105	E	Steps Hi-Lo	Q5116	E	Gnd					C	+1.58V
	B	Steps Hi-Lo		B	+0.02V				Q5932	E	+0.05V
	C	Steps Hi-Lo		C	+4.87V					B	+0.25V
Q5106	E	+22.9V	Q5301	E	Gnd					C	+21.3V
	B	+22.8V		B	+0.70V				Q5933	E	0V
	C	Steps Hi-Lo		C	+0.02V					B	+0.05V
Q5107	E	Gnd	Q5302	E	Gnd					C	+0.24V
	B	Steps Hi-Lo		B	+0.66V				Q5905	E	+0.02V
	C	Steps Hi-Lo		C	+0.06V					B	+0.02V
Q5108	E	+3.27V	Q5303	E	+4.74V					C	+19.2V
	B	+3.91V		B	+5.12V				Q5941	E	+23.4V
	C	+3.84V		C	+22.5V					B	+23.4V
Q5109	E	+13.1V	Q5304	E	+4.75V					C	+1.58V
	B	+12.3V		B	+5.12V				Q5942	E	+0.05V
	C	+13.0V		C	Gnd					B	+0.25V
Q5110	E	+3.89V	Q5305	E	+4.28V					C	+22.3V
	B	+4.50V		B	+4.75V				Q5907	E	+4.85V
	C	+8.71V		C	+22.5V					B	+4.85V
Q5111	E	Steps Hi-Lo	Q5306	E	+4.28V					C	Gnd
	B	Steps Hi-Lo		B	+4.75V				Q5921	E	+23.4V
	C	+22.0v		C	Gnd					B	+23.4V
Q5112	E	+22.0V								C	0V
	B	Steps Hi-Lo							Q5951	E	+23.4V
	C	Steps Hi-Lo								B	+23.4V
Q5113	E	+4.90V								C	0V
	B	+4.55V							Q5952	E	+0.05V
	C	+3.01V								B	+0.25V
Q5114	E	+4.90V								C	+23.4V
	B	+4.58V							Q5922	E	+0.05V
	C	+3.90V								B	+0.25V
										C	+21.3V
									Q5923	E	0V
										B	+0.05V
										C	+0.24V
											+6.50V

NOTE: Voltages measured with DVM—Player in “PLAY” mode unless otherwise indicated.





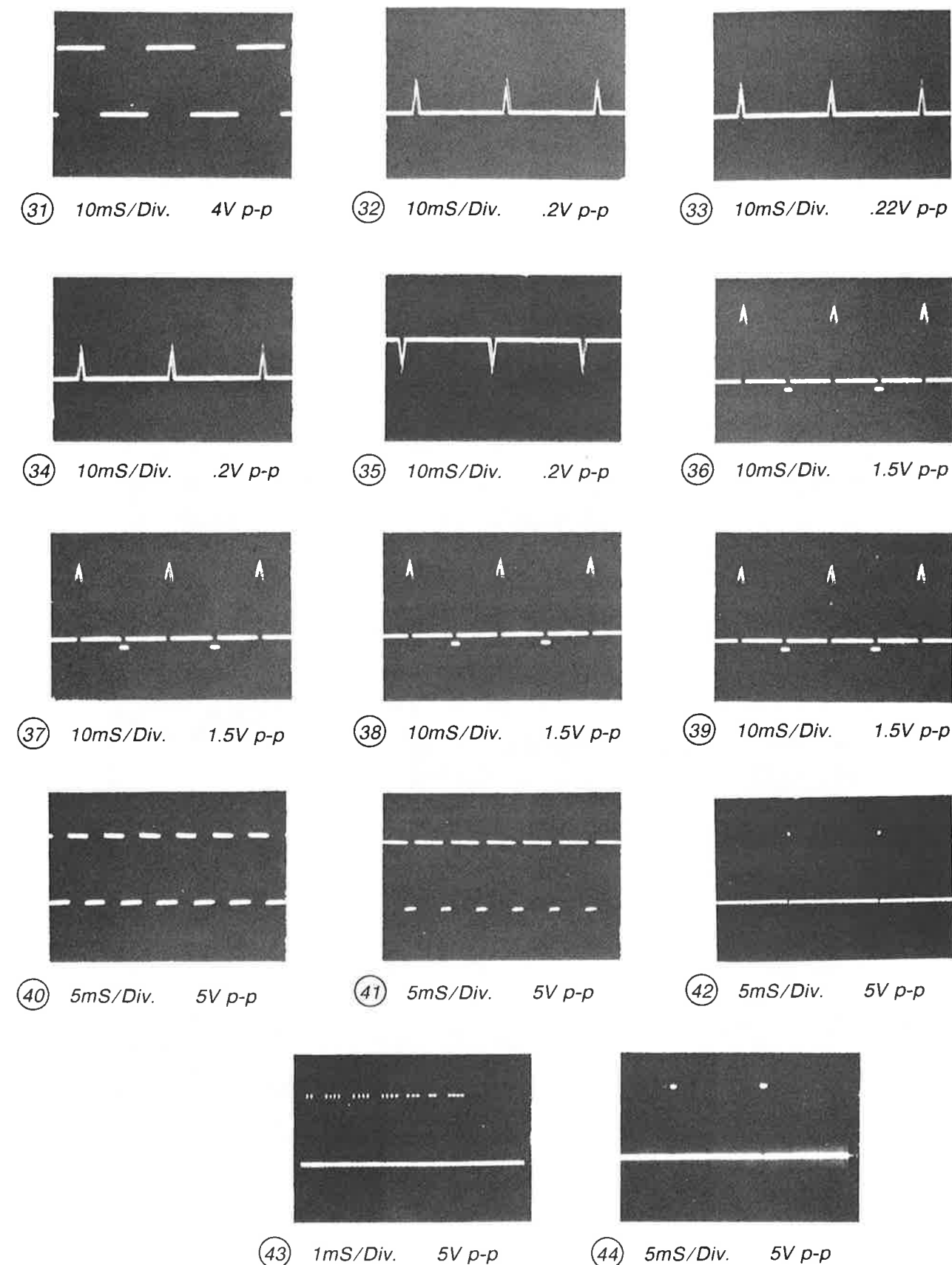
NOTE: L3503 and L3504 in RF modulator not used all versions.

Fig. 26—Test Point and Active Device Location

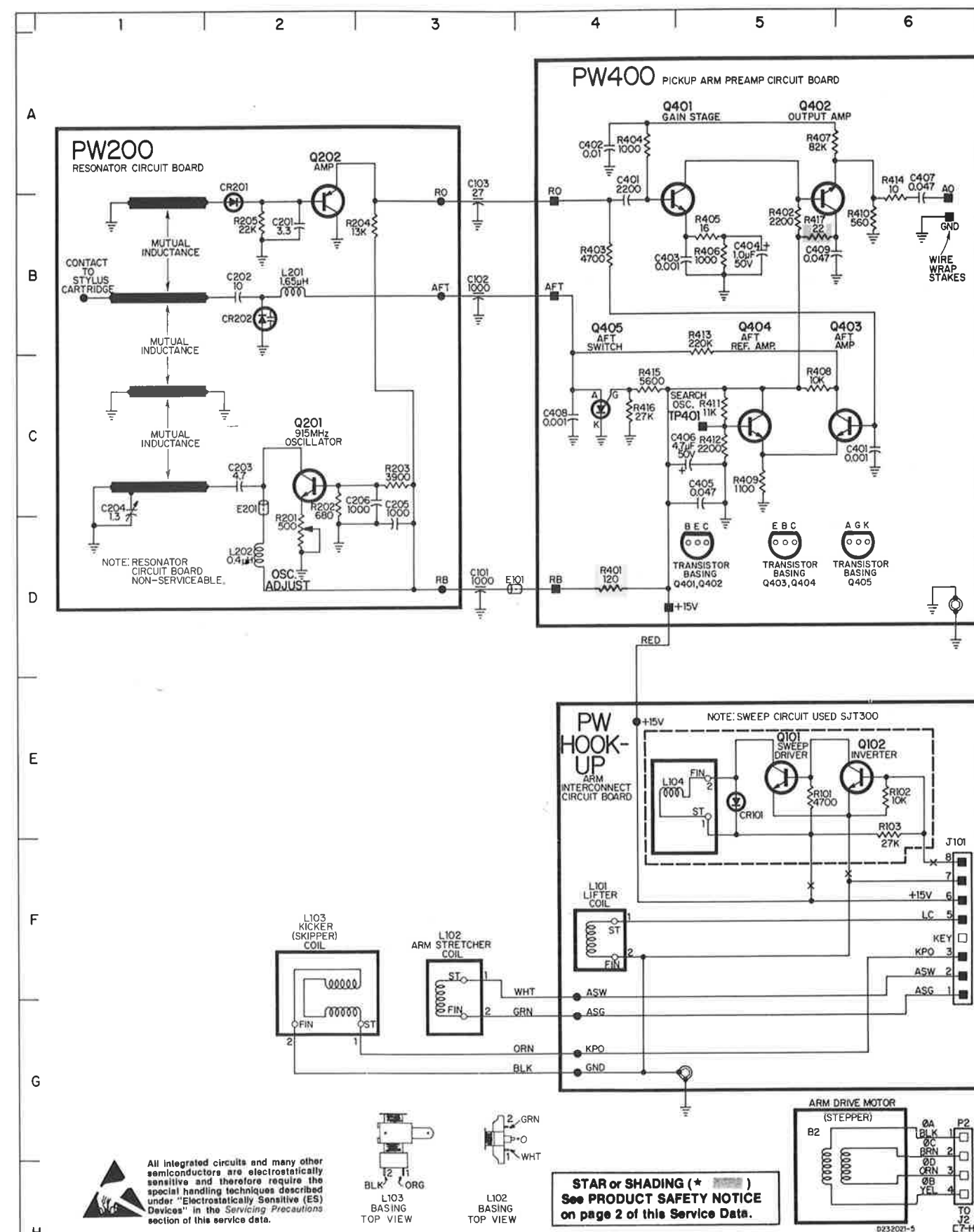
TEST POINT AND ACTIVE DEVICE IDENTIFICATION

TEST POINTS		ACTIVE DEVICES		ACTIVE DEVICES (Continued)	
TP2001	+ 22VDC	Q2001	Regulator	Q5302	Forward Ramp Switch
TP2002	+ 10VDC	Q2002	Current Limiter	Q5303	Kick Pulse Driver
TP2003	+ 5.0V Ref	Q2003	Driver	Q5304	Kick Pulse Driver
TP2004	+ 15VDC (In 3400 Area)	Q2004	Regulator	Q5305	Kick Pulse Output
TP2005	+ 5VDC	Q2005	Regulator	Q5306	Kick Pulse Output
TP2006	+ 12VDC (In 2500 Area)	Q2006	Current Limiter	Q5901	Reverse Function Switch
TP2501	FM In	Q2007	Current Limiter	Q5902	Function Drive Reverse
TP2502	Detector Out	Q2501	RF Amplifier	Q5903	Forward Function Switch
TP2503	Defect Input	Q2502	Output Detector/Switch	Q5904	Function Drive Forward
TP3101	Anlac Setup	Q2503	Output Detector/Switch	Q5905	Function Motor Output Forward
TP3102	Arm Input	Q2504	Gain Control	Q5906	Function Motor Output Reverse
TP3201	5.3MHz VCO	Q2505	AGC Amplifier	Q5907	Pause Line Buffer
TP3202	Video Input to U3301	Q2506	Sync Stripper	Q5921	Current Source Switch
TP3301	Vertical Detail Out	Q2507	Clamp	Q5922	Drive Amplifier
TP3302	Luminance Out	Q2701*	Video Driver	Q5923	Turntable Motor Driver B
TP3303	Vertical Detail	Q3101	N-Lac Buffer	Q5931	Current Source Switch
TP3304	1.53MHz Chroma	Q3102	N-Lac Amplifier	Q5932	Drive Amplifier
TP3401	VCXO Setup	Q3103	N-Lac Amplifier	Q5933	Turntable Motor Driver A
TP3402	VCXO Input	Q3104	N-Lac Output Driver	Q5941	Current Source Switch
TP3403	+ 7VDC Ref	Q3105	716KHz Amplifier	Q5942	Drive Amplifier
TP3404	Luminance Input	Q3107	Control Amplifier	Q5943	Turntable Motor Driver D
TP3405	1.53MHz Clock	Q3201	Phase Corrector	Q5951	Current Source Switch
TP3406	3.58MHz Oscillator	Q3202	Video Buffer	Q5952	Drive Amplifier
TP3407	1.53MHz Clock Buffered	Q3301	Delayed Video Drive	Q5953	Turntable Motor Driver C
TP3408	Phase Detector Output	Q3303	Vertical Detail Buffer	U2001	Quad Operational Amplifier
TP3409	5.11MHz Oscillator	Q3304	Chroma Driver	U2501	Sync Detector
TP3410	Video Input to Modulator	Q3305	Chroma Buffer	U3101	Sync Detector
TP3411	Armstretcher Setup	Q3306	Luma Buffer	U3201	Video FM Demodulator
TP3501	Channel 3 Output	Q3401	Video Buffer	U3301	Comb Filter/Defect Corrector
TP3502	Channel 4 Output	Q3402	Video Amplifier	U3401	Armstretcher Drive
TP3503	4.5MHz Input	Q3403	Clock Phase Shifter	U3402	Video Converter
TP3504	Audio Input	Q3404	Clock Buffer	U3501	RF Modulator
TP4001	Left Plus Right Output	Q3405	Transducer Driver	U4101	Audio Demodulator
TP4002*	Left Minus Right Output	Q3406	Transducer Driver	U4102*	Audio Demodulator
TP4003*	Rectified Output	Q3407	Transducer Driver	U4200	Track/Hold Mute
TP4006*	Left Matrix Output	Q3408	Transducer Driver	U4300*	Audio Matrix & Buffer
TP4007*	Right Matrix Output	Q3409	Video Blanking	U4400*	Decoder Rectifier
TP4008	716KHz VCO	Q3412	Noise Coring Amplifier	U4500*	Decoder Control
TP4009*	905KHz VCO	Q3413	Noise Coring Buffer	U4600*	Decoder Amplifier
TP4010*	Decoder Disable	Q3501	Bias Switch	U5101	Player Control
TP4011	+ 7.5VDC Ref	Q4102*	Decoder Defeat		Microcomputer
TP4012*	+ 1.4VDC Ref	Q4301*	Left Channel Buffer	U5102	Daxi Buffer
TP5101	Audio Channel A Mute	Q4302*	Right Channel Buffer	U5901	Mechanism Microcomputer
TP5102	Audio Channel B Mute	Q4501*	Current Source	U5902	Turntable Drive
TP5103	Squelch	Q5101	Least Significant Digit Driver	VR2001	5.8V Zener
TP5901	Turntable Motor Drive Voltage B	Q5102	Most Significant Digit Driver	VR3301	9.1V Zener
TP5902	Turntable Motor Drive Voltage A	Q5103	Daxi Status Inverter	VR5101	2.85V Zener
TP5903	Turntable Motor Drive Current B	Q5104	Stepper Output B		*Not Used on Model SJT100.
TP5904	Turntable Motor Drive Current A	Q5105	Stepper Drive A		
TP5905	Turntable Motor Drive Voltage D	Q5106	Stepper Output A		
TP5906	Turntable Motor Drive Voltage C	Q5107	Stepper Output D		
TP5907	Turntable Motor Drive Current D	Q5108	Lifter Drive		
TP5908	Turntable Motor Drive Current C	Q5109	Lifter Output		
		Q5110	Vertical Detail Driver		
		Q5111	Stepper Drive C		
		Q5112	Stepper Output C		
		Q5113	LED Display Select		
		Q5114	Discrete LED Select		
		Q5115	Low Voltage Detector		
		Q5116	Reset Switch		
		Q5301	Reverse Ramp Switch		

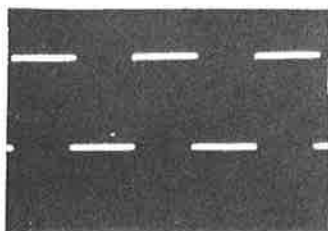
## WAVEFORMS (Continued)



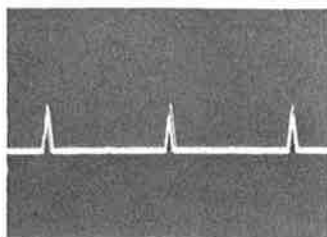
## SCHEMATIC DIAGRAM



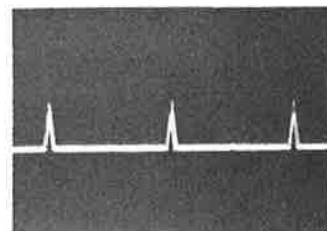
## WAVEFORMS (Continued)



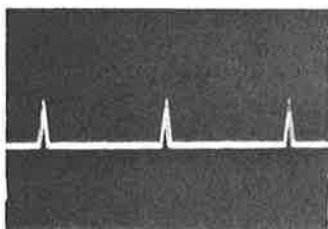
(31) 10mS/Div. 4V p-p



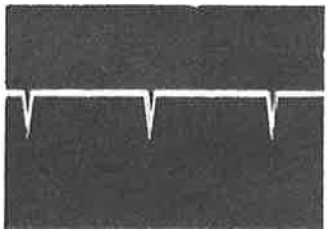
(32) 10mS/Div. .2V p-p



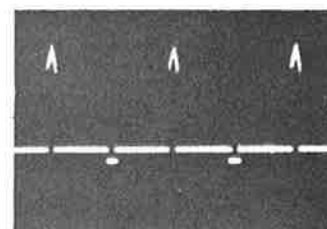
(33) 10mS/Div. .22V p-p



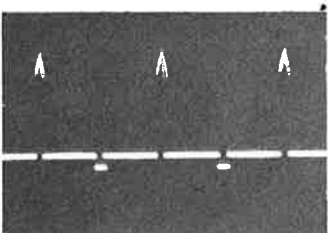
(34) 10mS/Div. .2V p-p



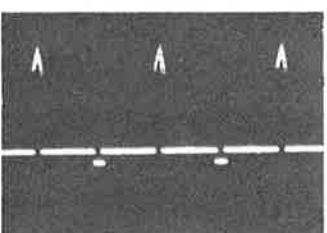
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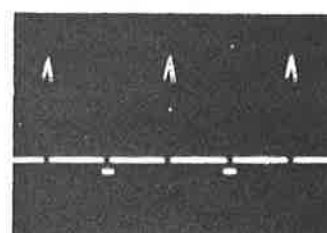
(36) 10mS/Div. 1.5V p-p



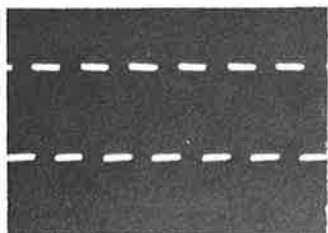
(37) 10mS/Div. 1.5V p-p



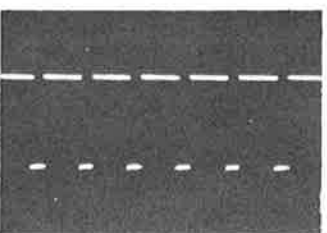
(38) 10mS/Div. 1.5V p-p



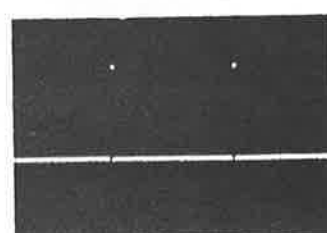
(39) 10mS/Div. 1.5V p-p



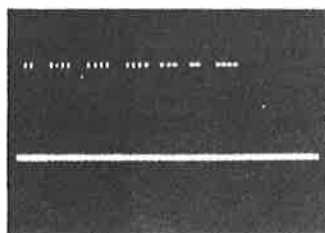
(40) 5mS/Div. 5V p-p



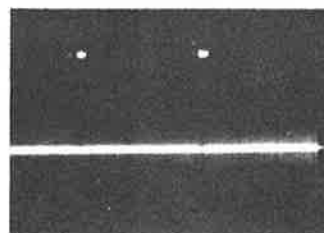
(41) 5mS/Div. 5V p-p



(42) 5mS/Div. 5V p-p



(43) 1mS/Div. 5V p-p



(44) 5mS/Div. 5V p-p



## ELECTRICAL ADJUSTMENTS

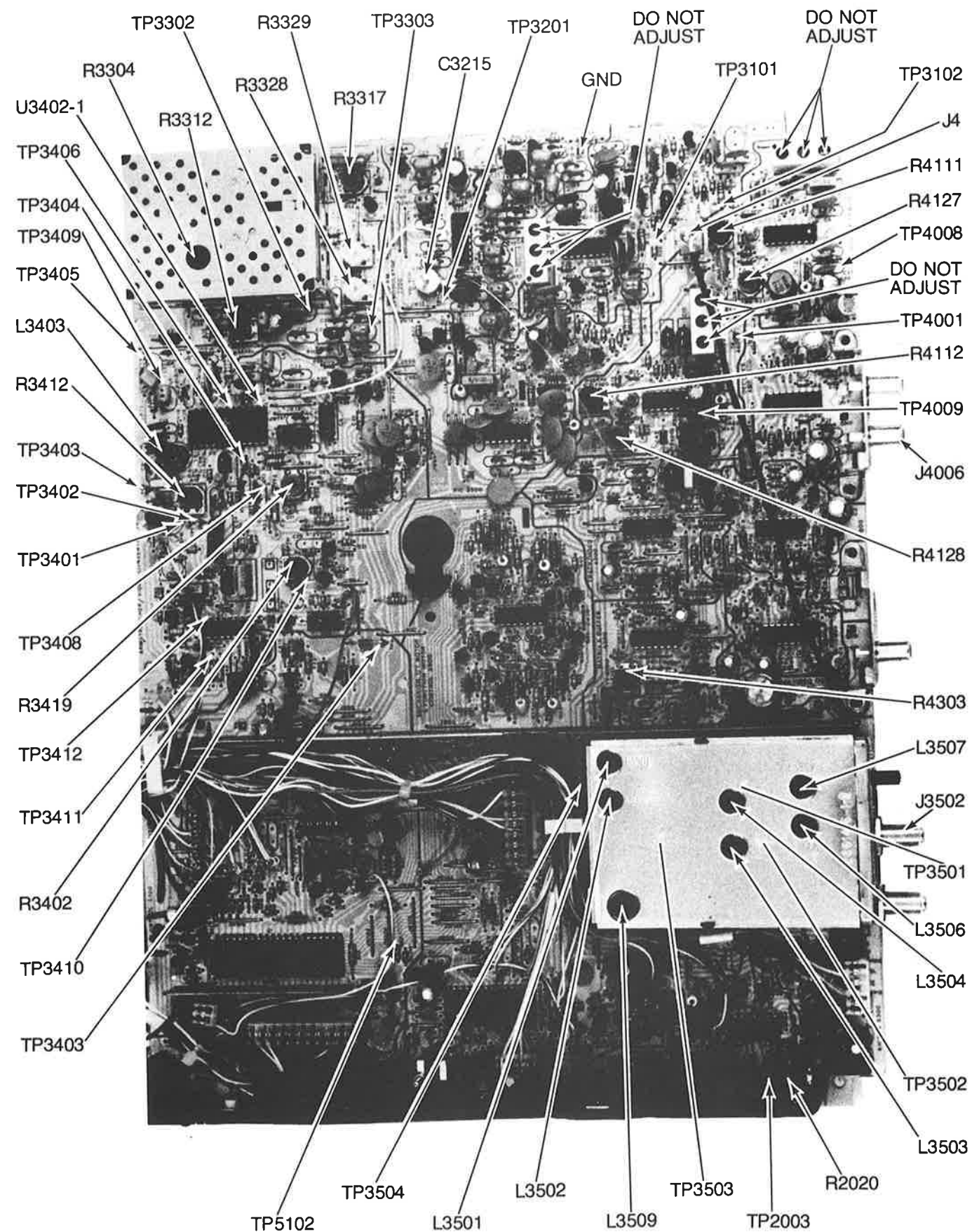
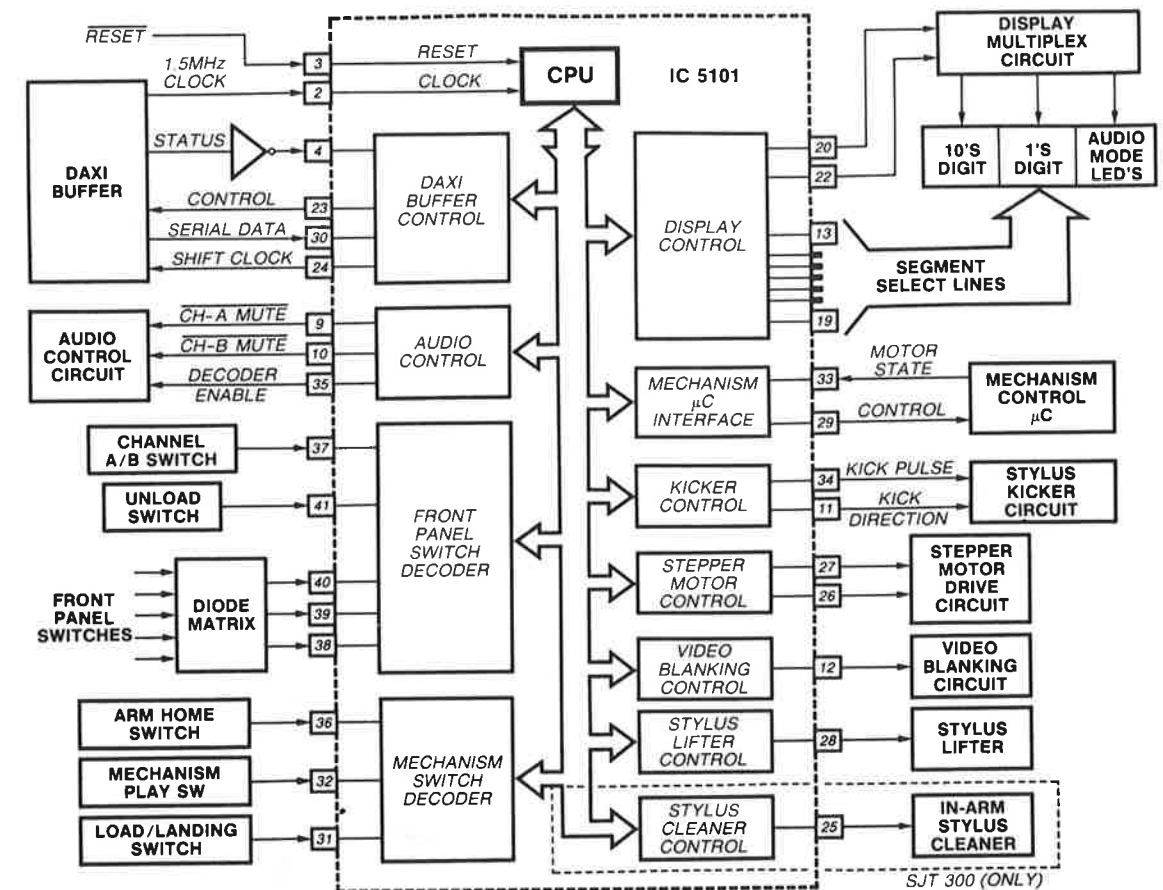
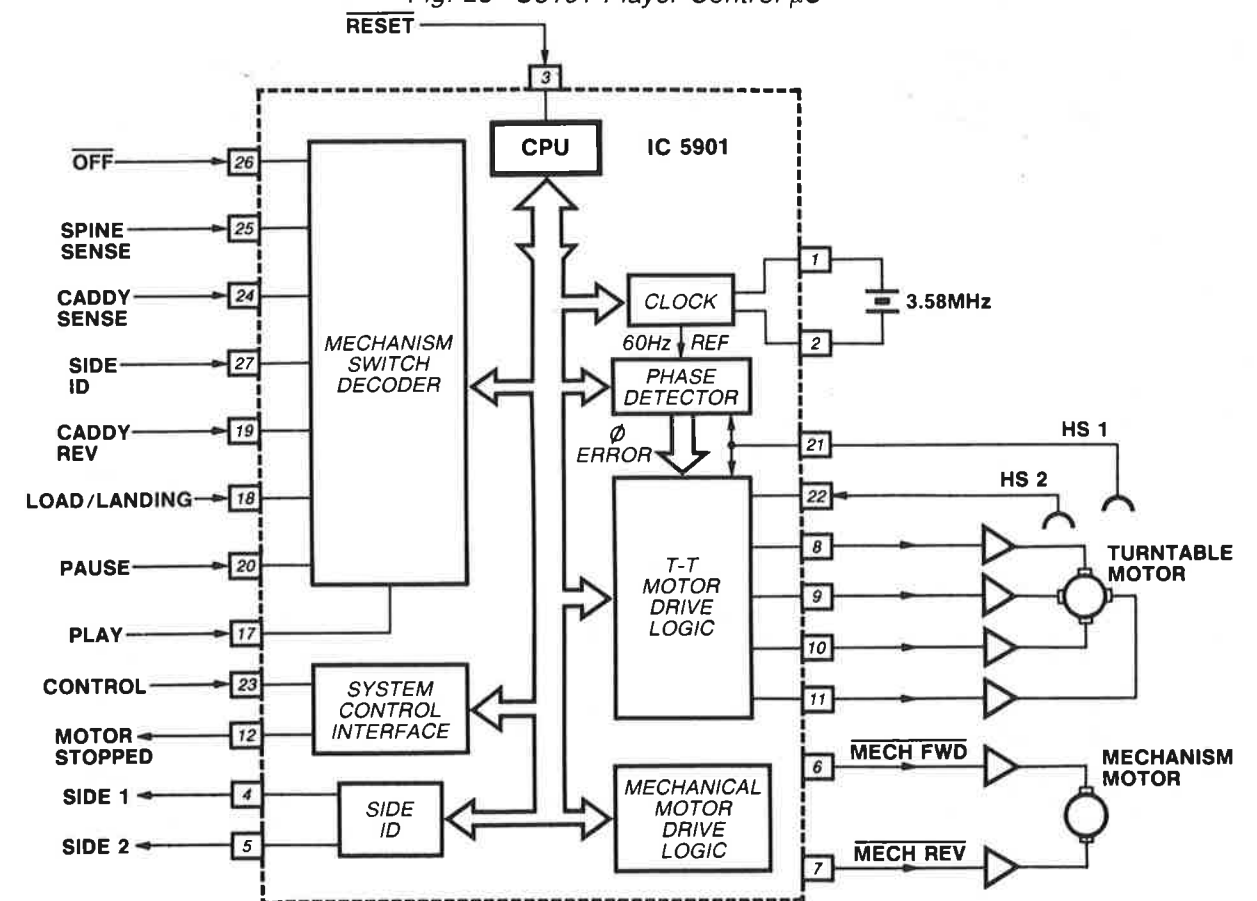
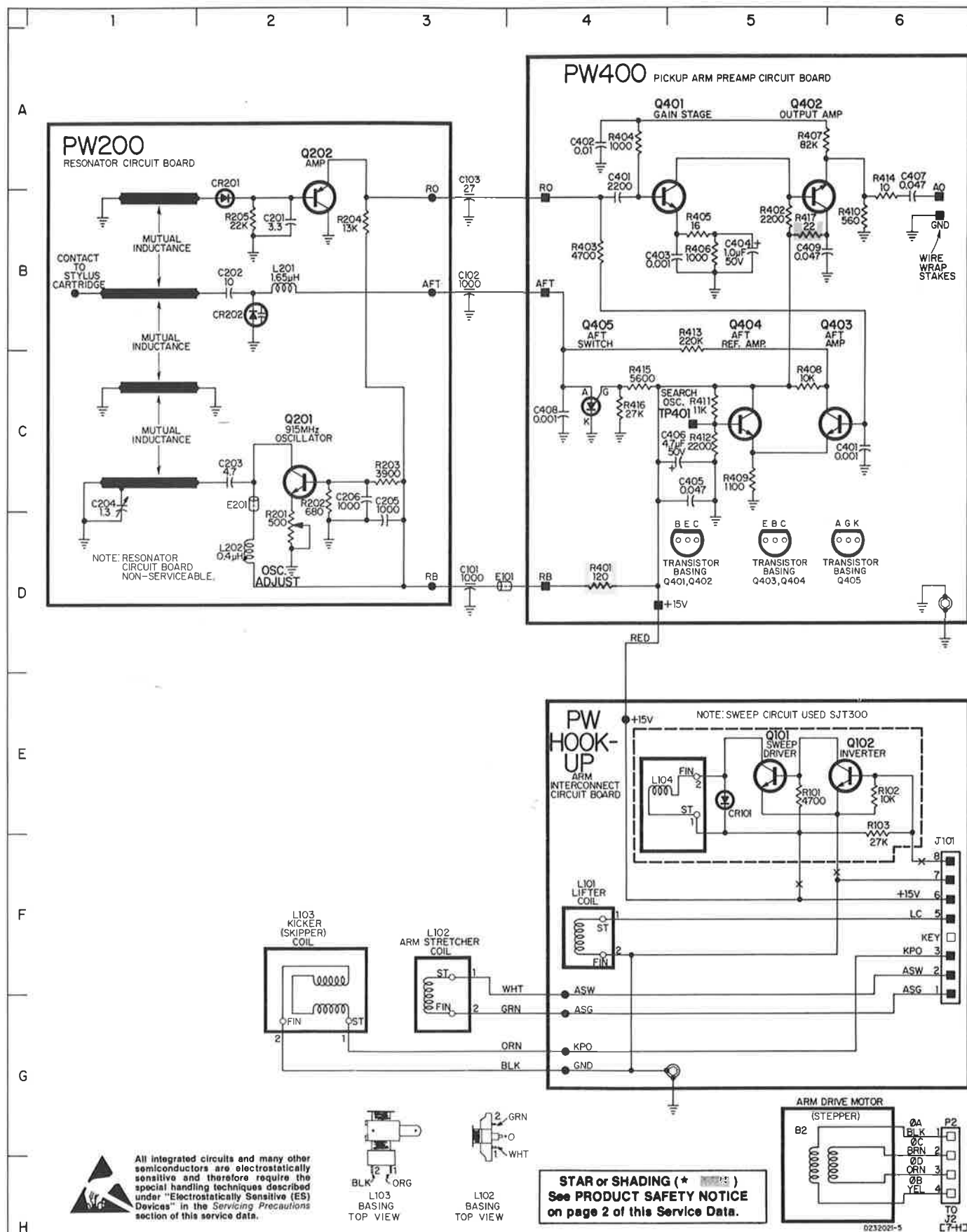


Fig. 27—Adjustment Points

 $\mu$ C FUNCTIONAL BLOCK DIAGRAMFig. 28—U5101 Player Control  $\mu$ CFig. 29—U5901 Mechanism Control  $\mu$ C

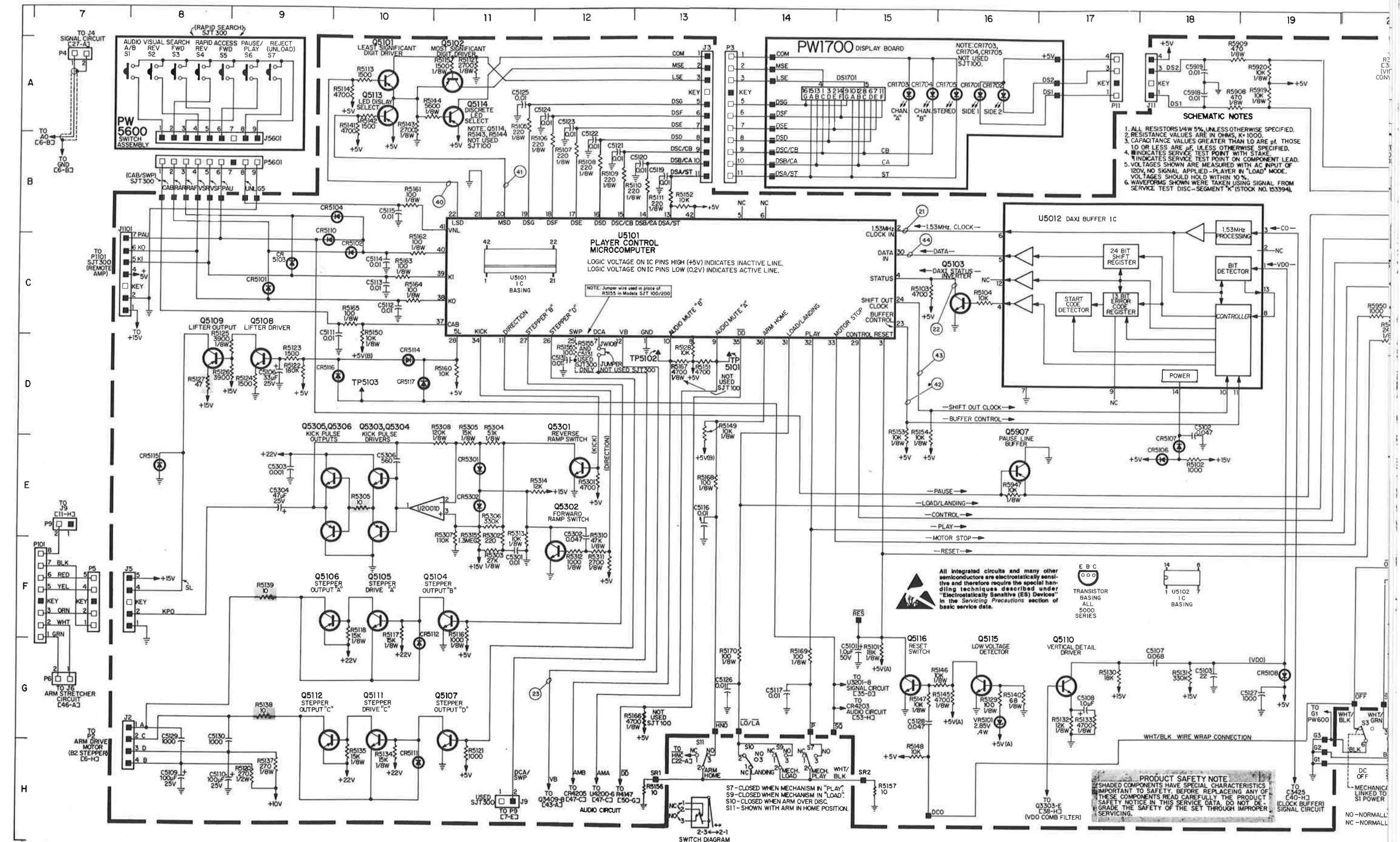


## SCHEMATIC DIAGRAM

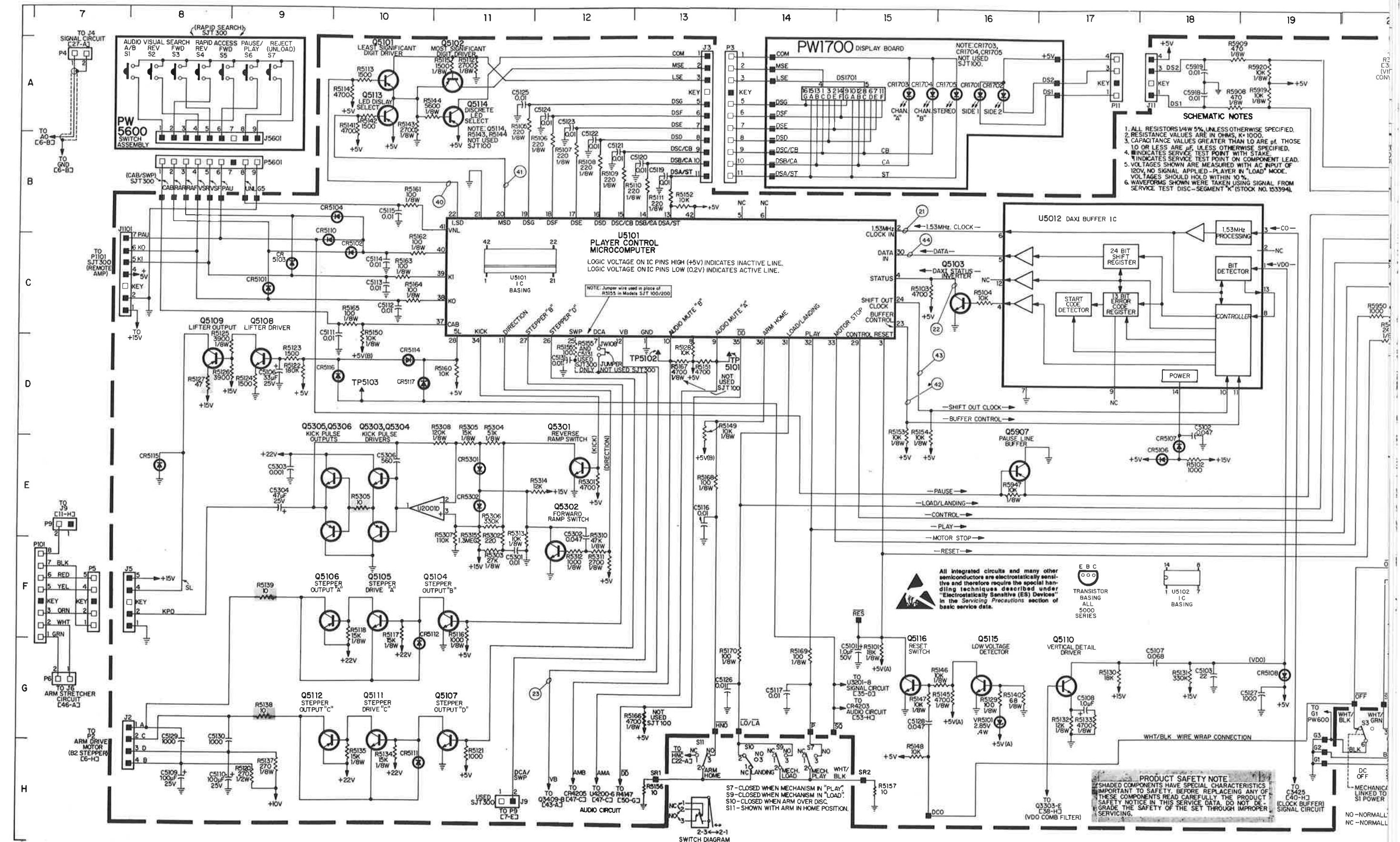




### SCHEMATIC DIAGRAM



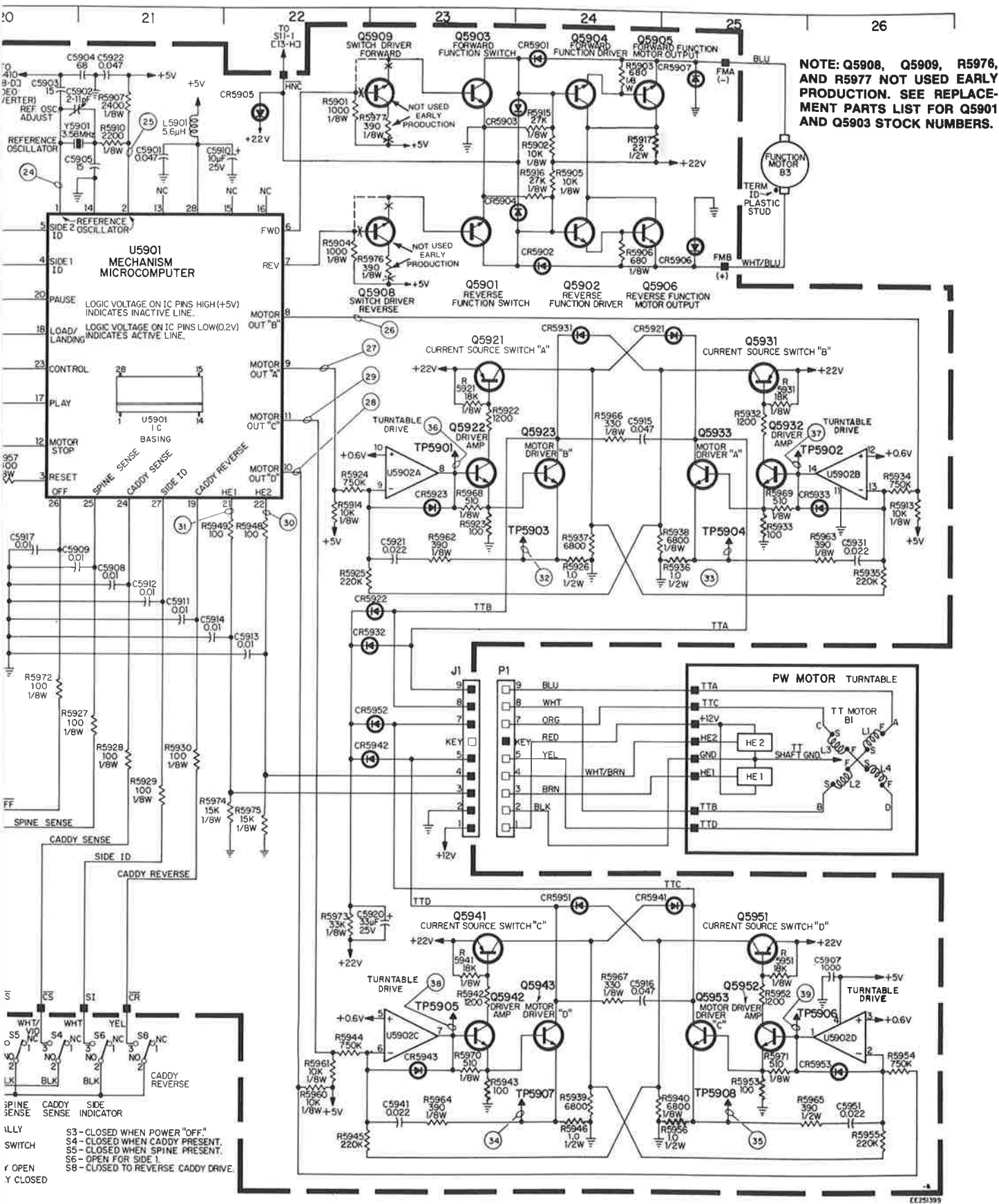
### SCHEMATIC DIAGRAM



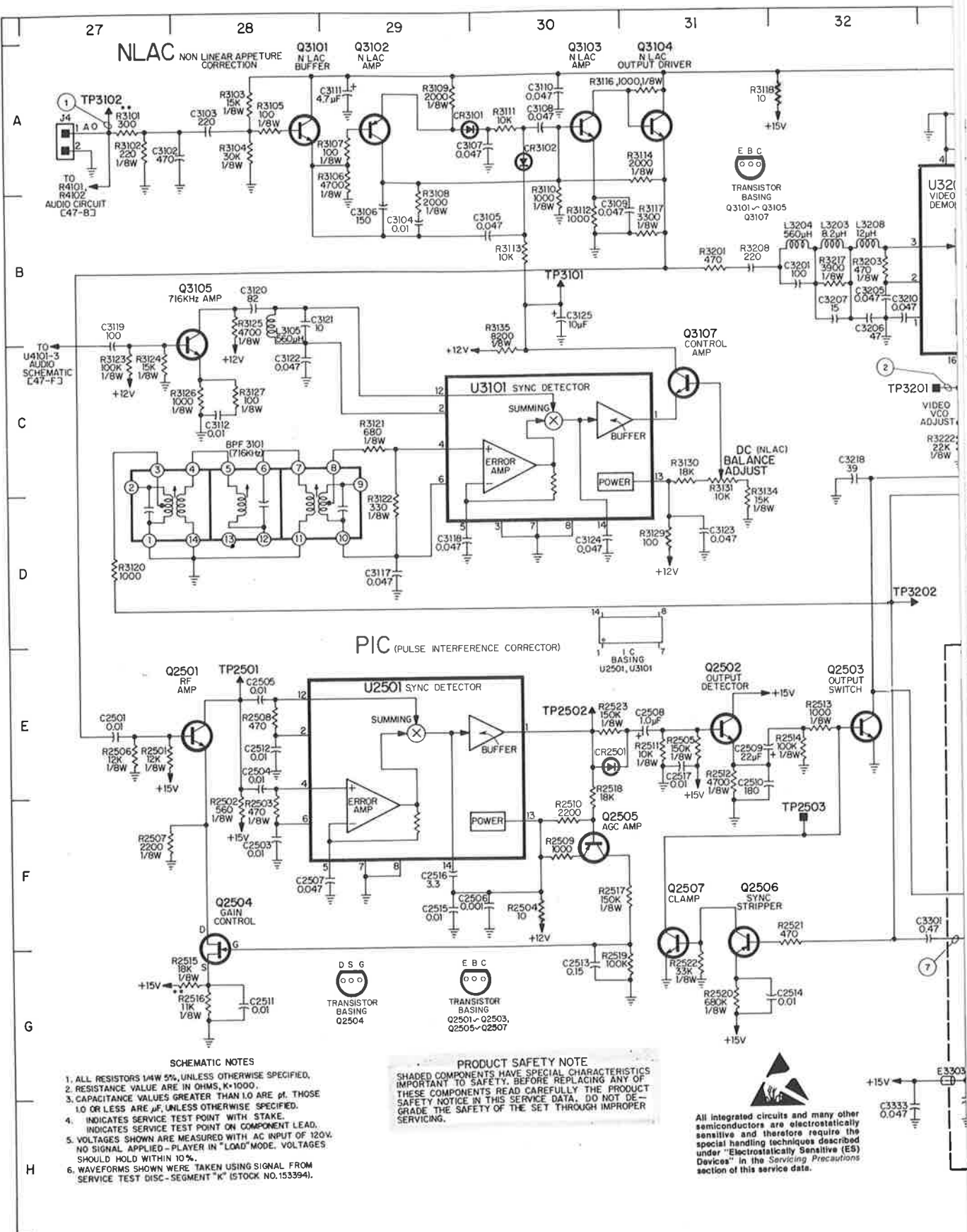
*Fig. 32—Player/Mechanism Control Electronics*

### Player/Mechanism Control

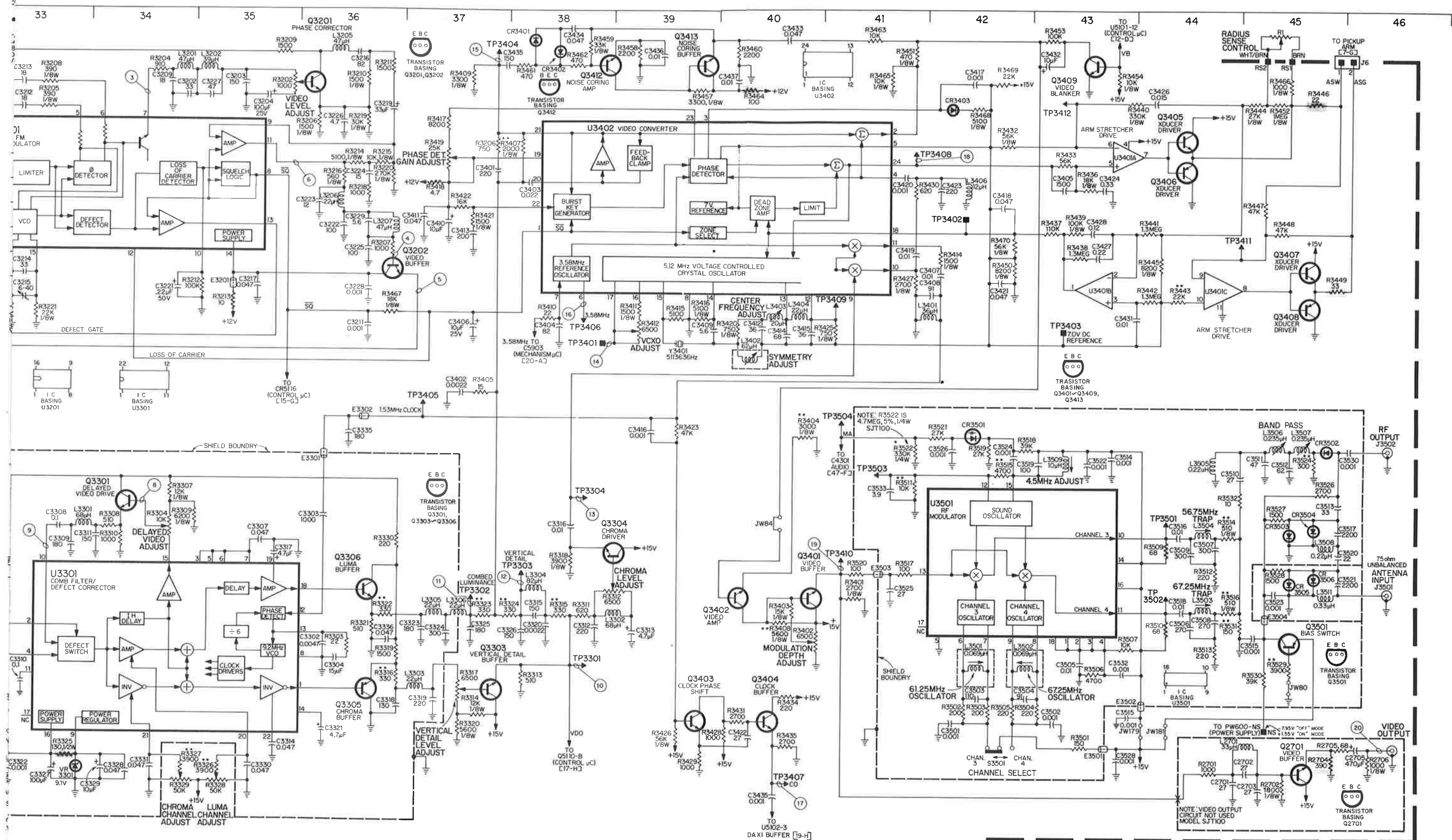
SCHEMATIC DIAGRAM



SCHEMATIC DIAGRAM



## SCHEMATIC DIAGRAM



NOTE: Late production instruments do not use 56.75MHz and 67.25MHz traps in R.F. modulator section. L3503, L3504, C3506, C3507, C3508, C3509, R3512, and R3513 deleted. C3516 connects direct to R3514 and C3518 connects direct to R3516.



## SCHEMATIC DIAGRAM

## SCHEMATIC DIAGRAM

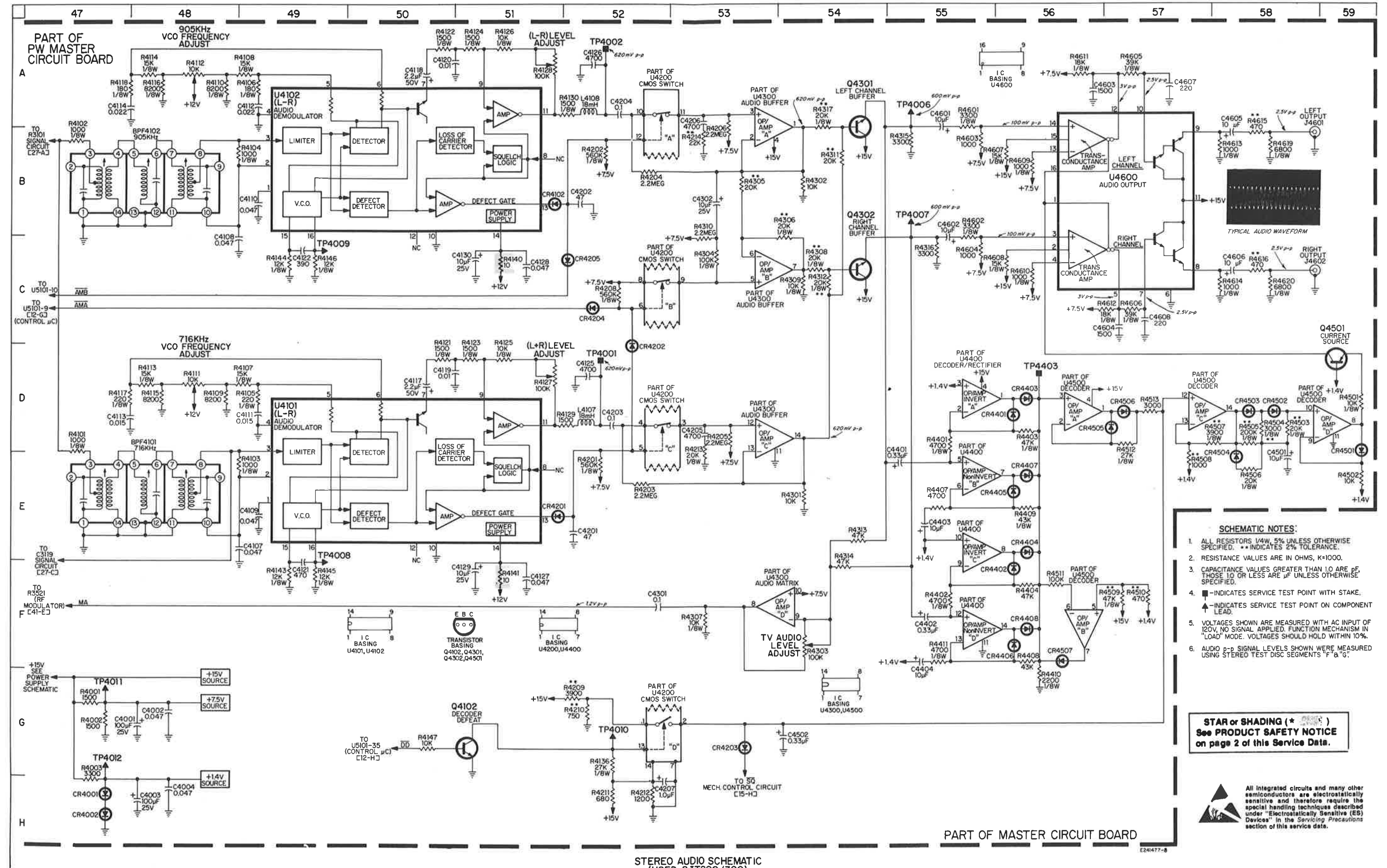
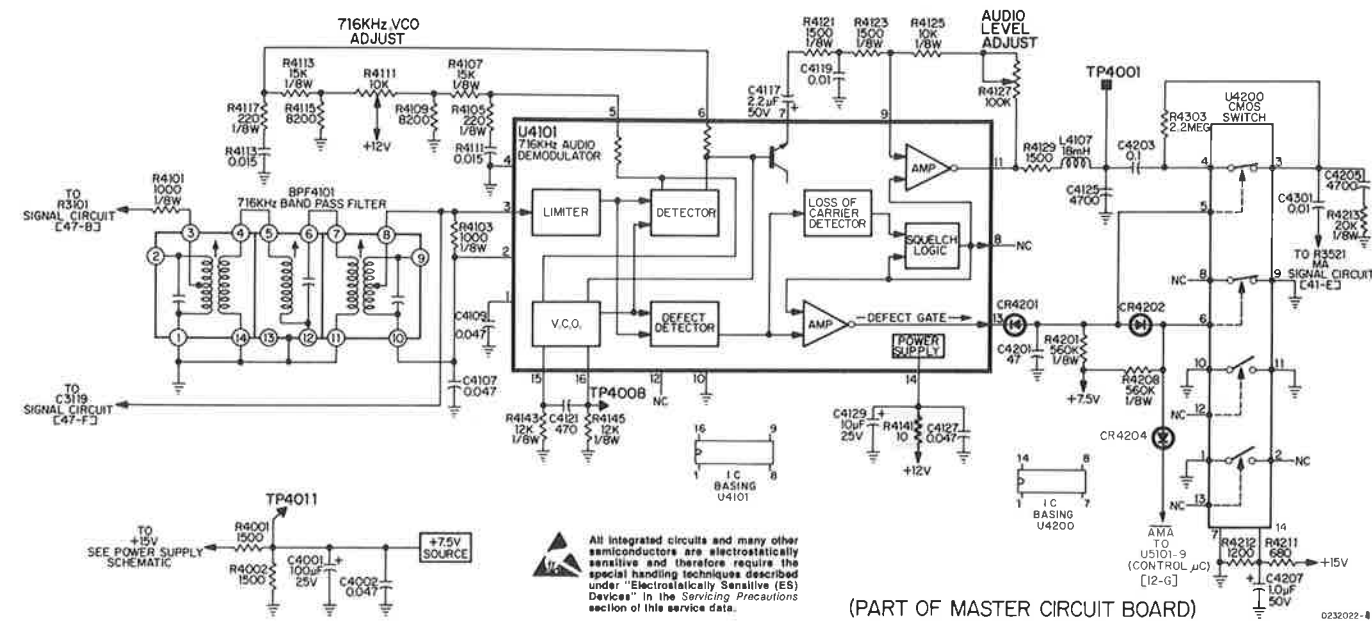
STEREO AUDIO SCHEMATIC  
(USED SJT200/300)

Fig. 34a—Stereo Audio Electronics SJT 200/300

## SCHEMATIC DIAGRAM









STAR or SHADING ( \* )  
See PRODUCT SAFETY NOTICE  
on page 2 of this Service Data.

SCHEMATIC DIAGRAM/CIRCUIT BOARDS

NOTES:

- 1. ALL RESISTORS 1/4W UNLESS OTHERWISE SPECIFIED.
- 2. RESISTANCE VALUES IN OHMS, K=1000.
- 3. ALL RESISTORS ARE 5% TOLERANCE, UNLESS OTHERWISE SPECIFIED.

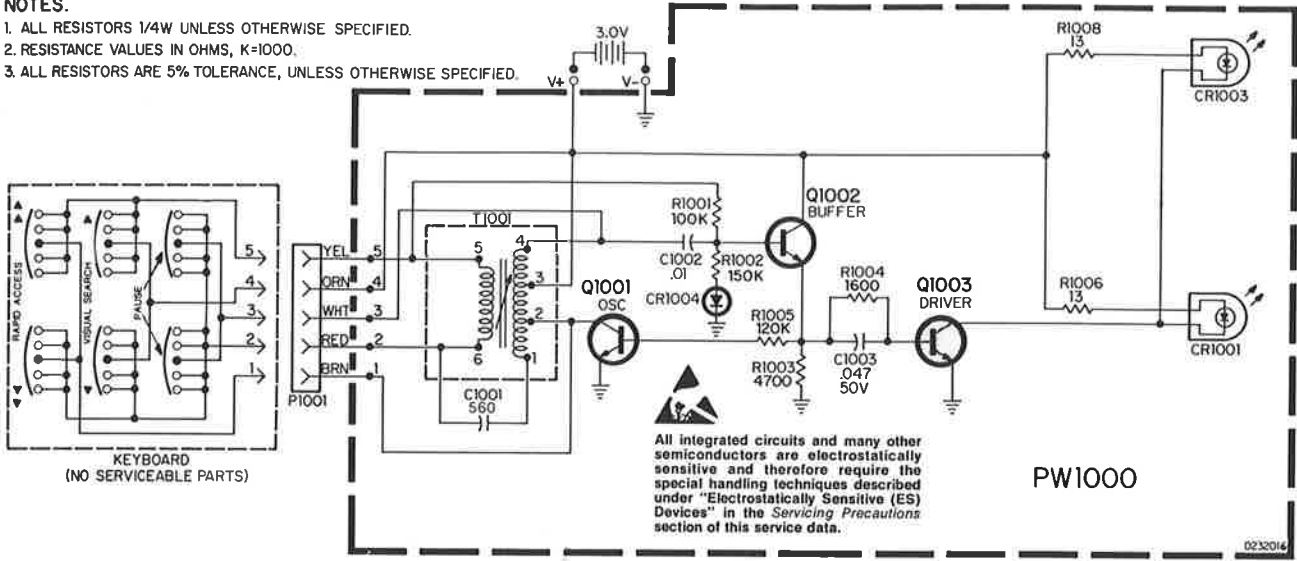


Fig. 37—CRK 34 Remote Transmitter Schematic SJT 300

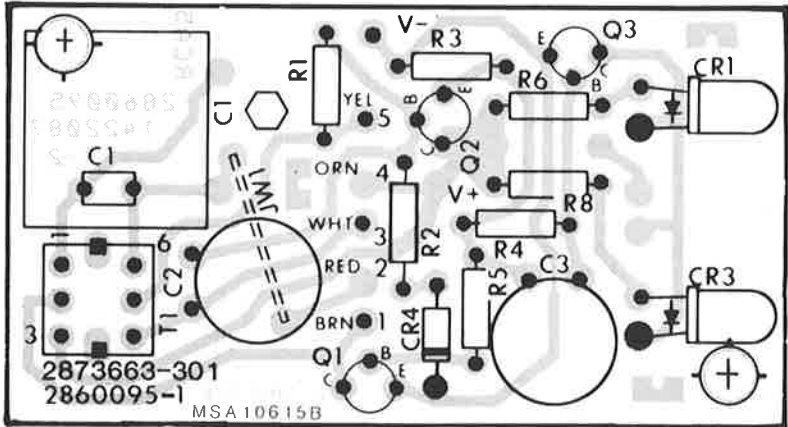


Fig. 38—PW 1000 Circuit Board Assembly (SJT 300)

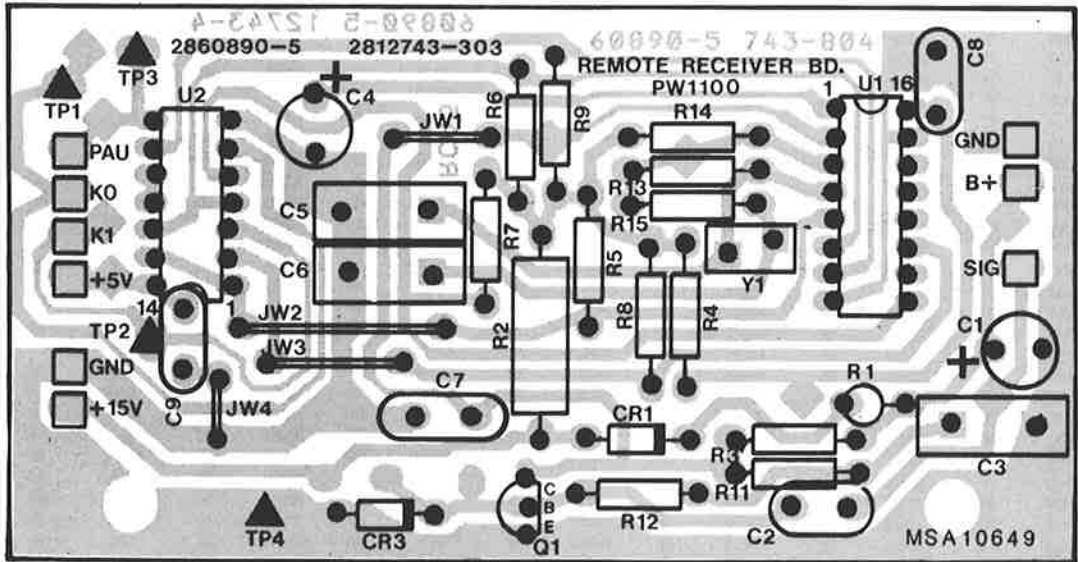


Fig. 39—PW 1100 Circuit Board Assembly (SJT 300)

STAR or SHADING ( \* )  
See PRODUCT SAFETY NOTICE  
on page 2 of this Service Data.

SCHEMATIC DIAGRAM

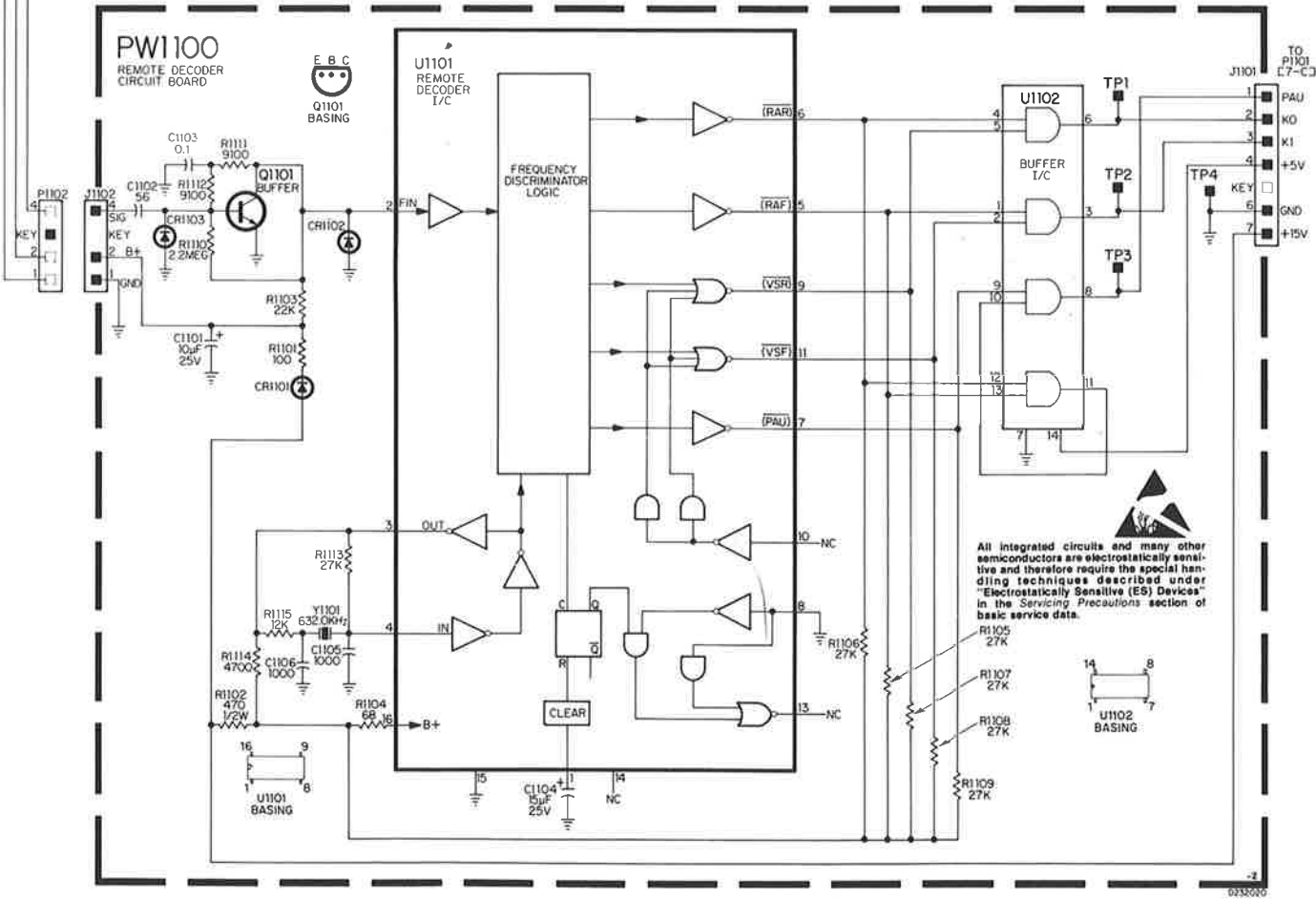
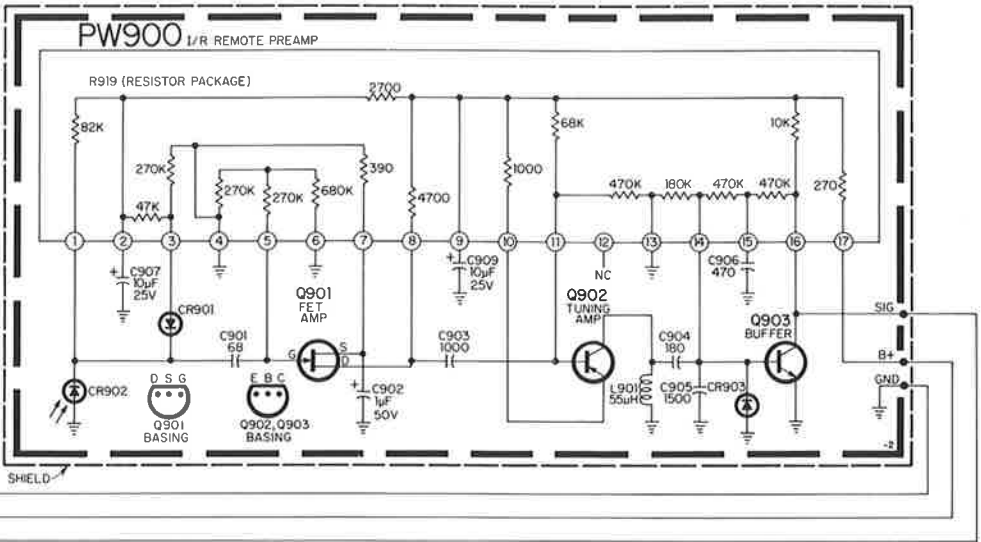


Fig. 40—Remote Preamp/Decoder Schematic (SJT 300)

CIRCUIT BOARDS

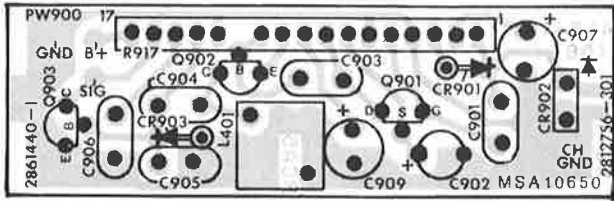


Fig. 41—PW 900 Circuit Board Assembly (SJT 300)

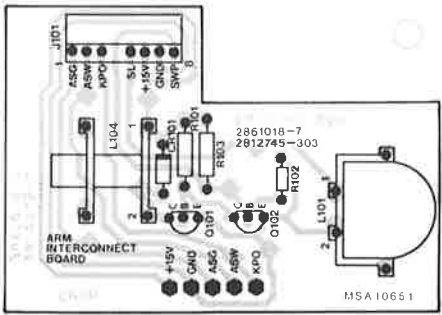


Fig. 42—PW Arm Interconnect Circuit Board Assembly

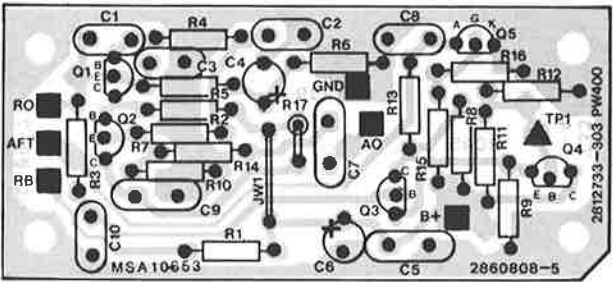


Fig. 43—PW 400 Circuit Board Assembly

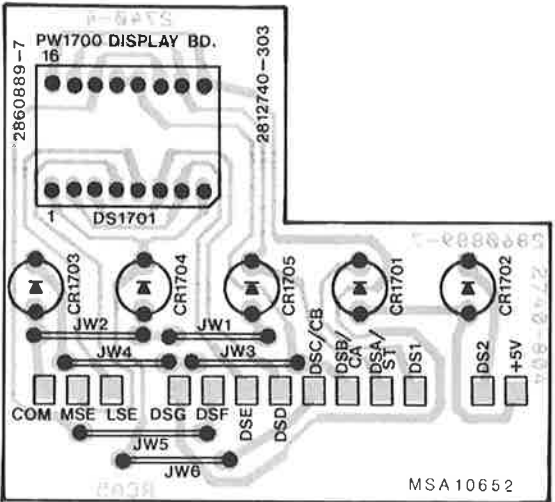


Fig. 44—PW 1700 Circuit Board Assembly

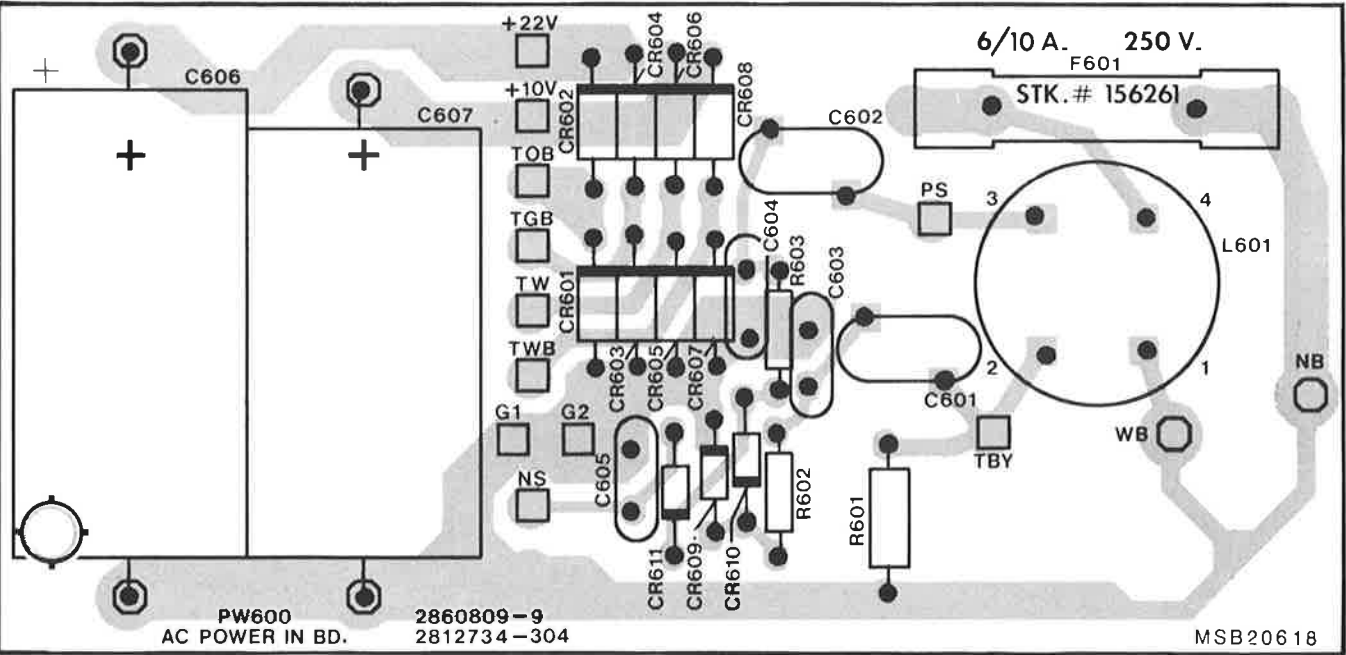
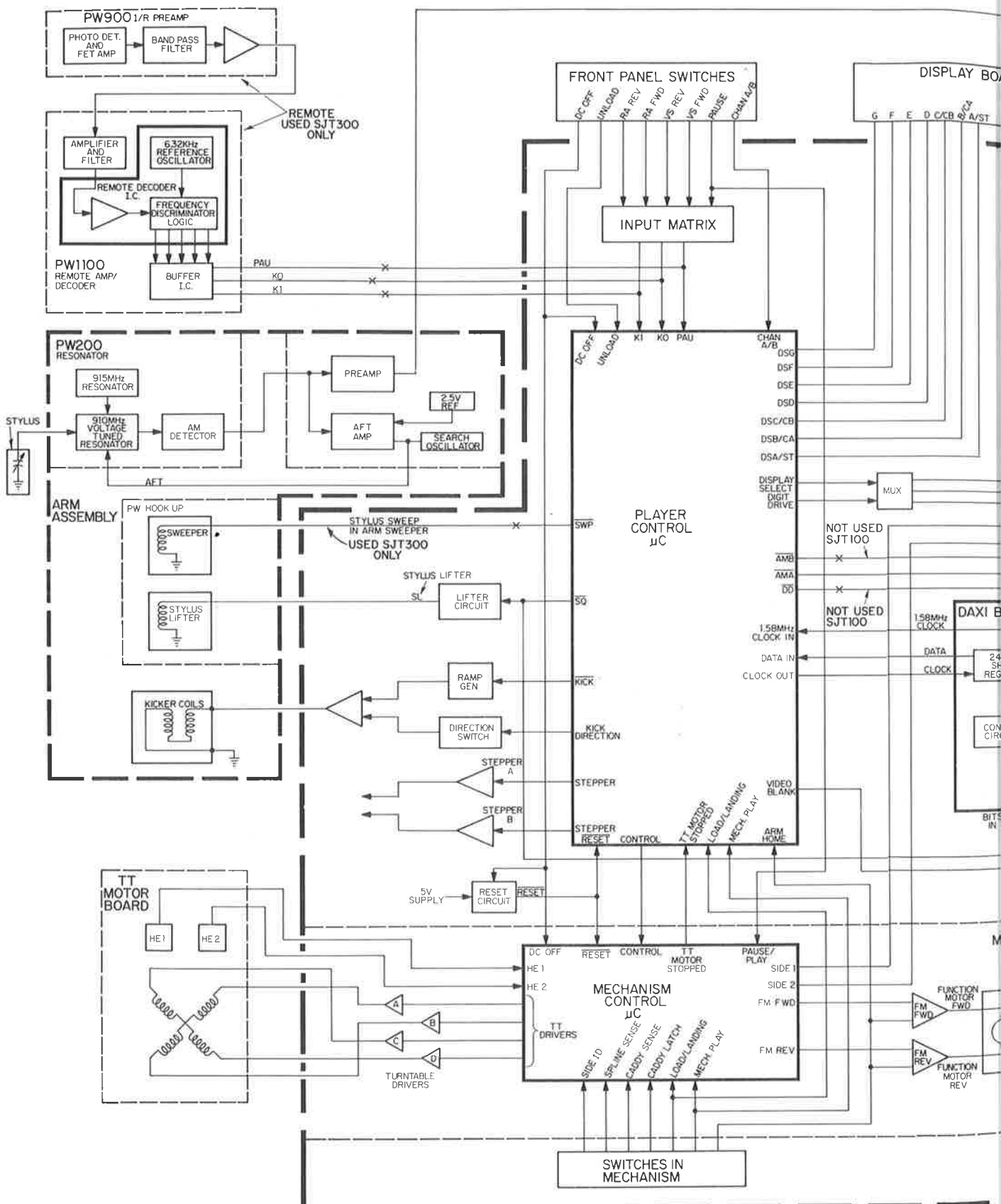


Fig. 45—PW 600 Circuit Board Assembly

BLOCK DIAGRAM



Functional Block Diagram

## BLOCK DIAGRAM

## BLOCK DIAGRAM

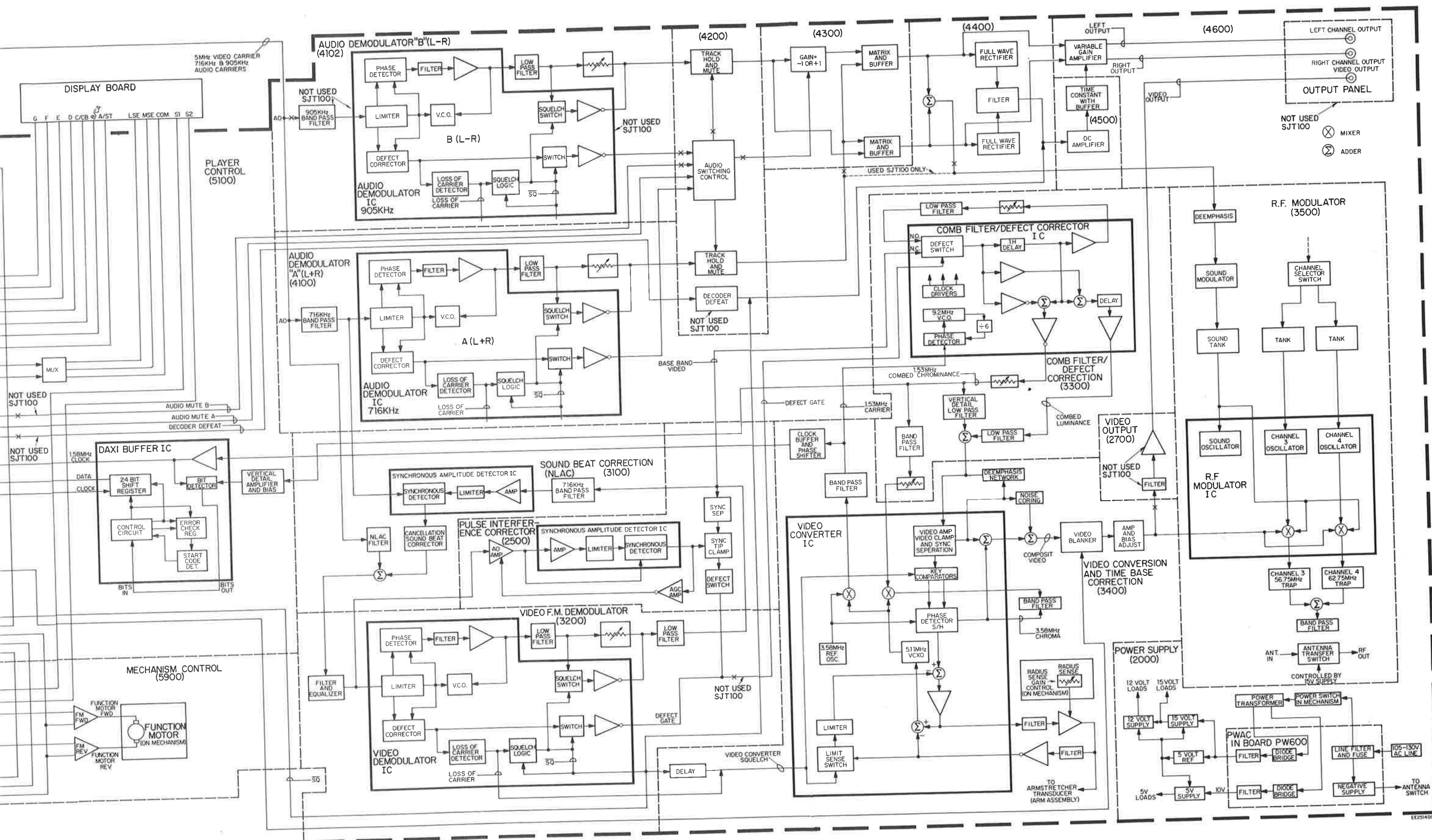
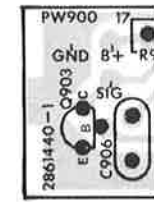
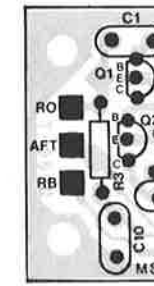


Fig. 46—Functional Block Diagram SJT 100/200/

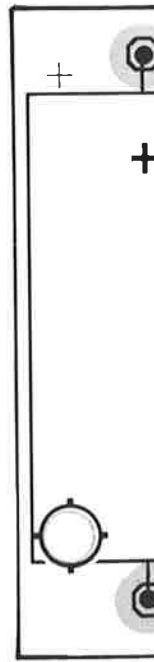




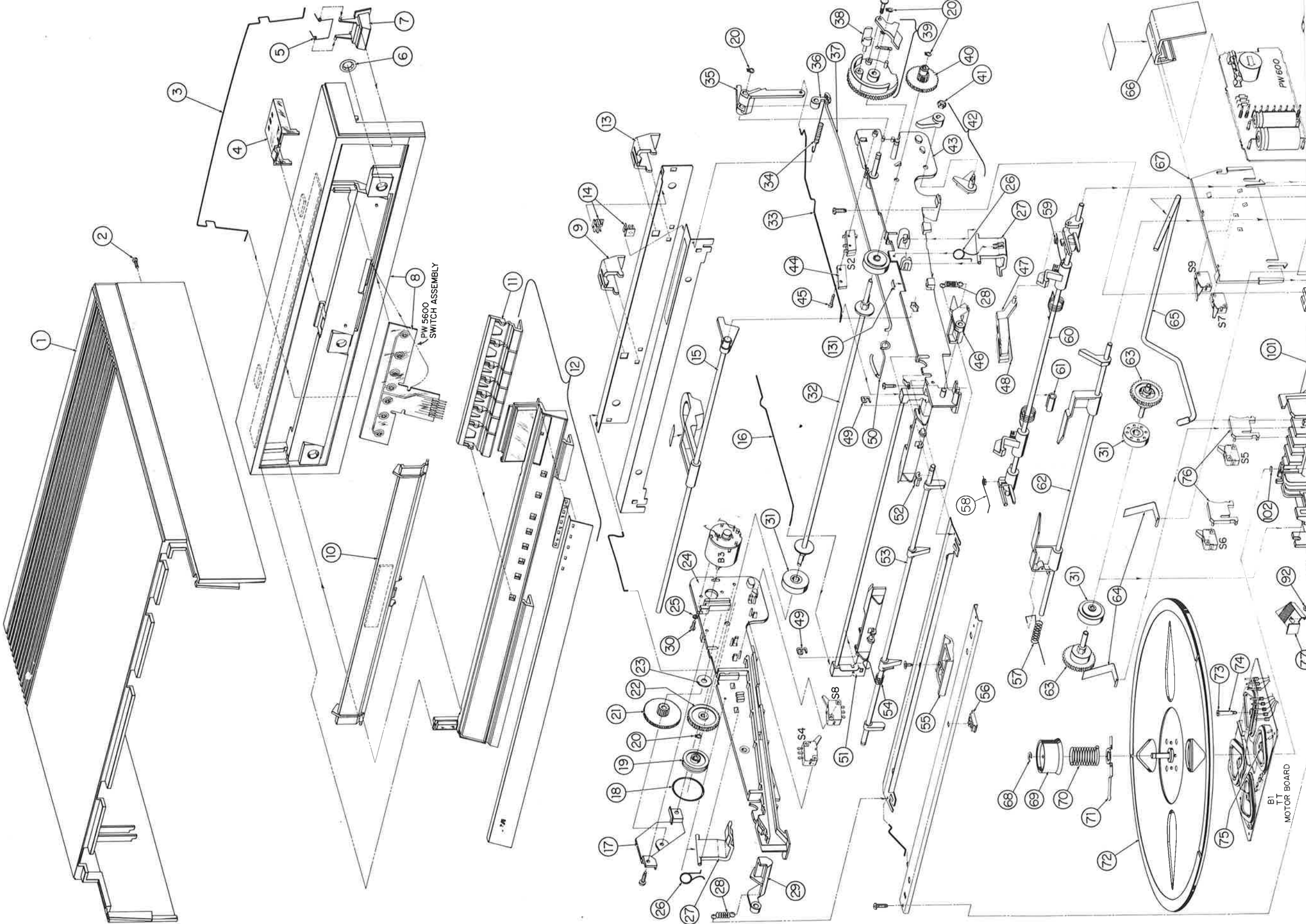
NOTE:  
Fig. 41—PW

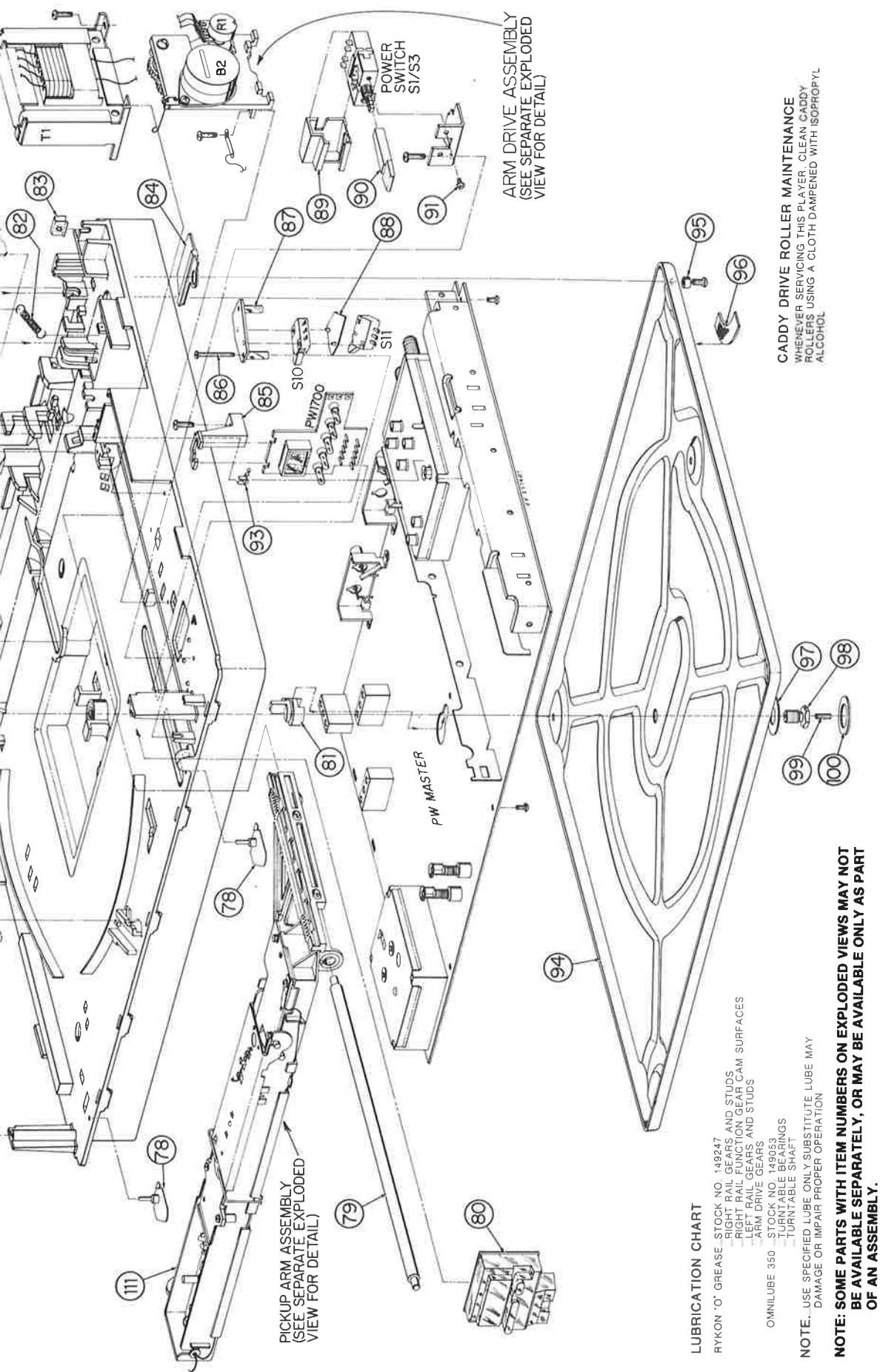


NOTE:  
Fig. 43



EXPLODED VIEW





**Fig. 47—Cabinet and Player Mechanism**

### EXPLODED VIEW

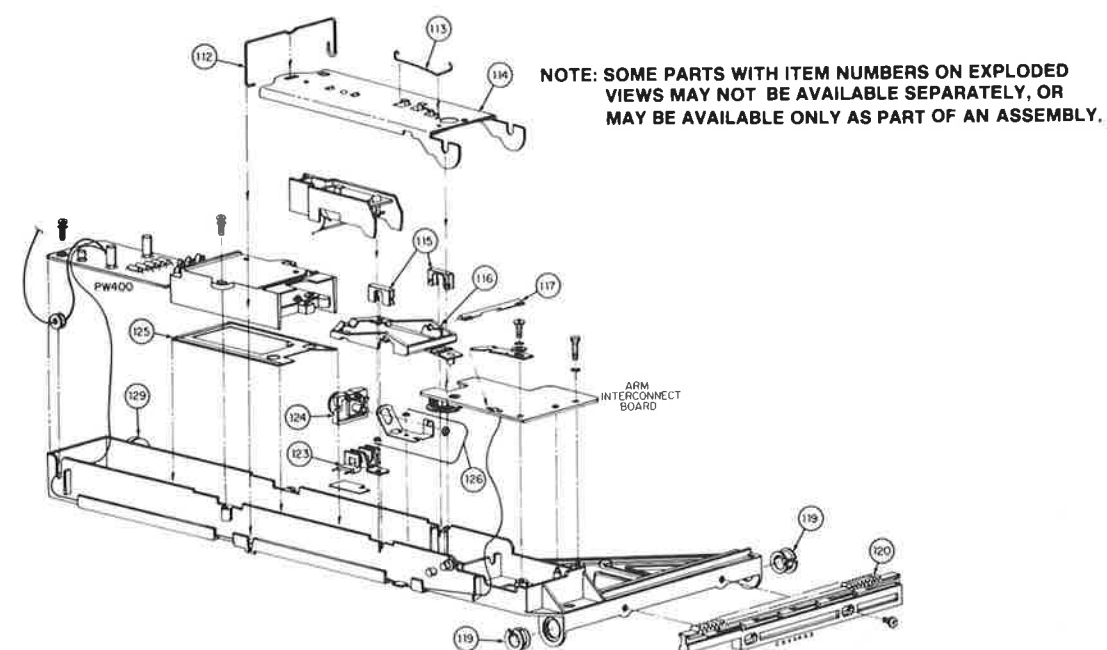


Fig. 48—Arm Assembly SJT 100/200

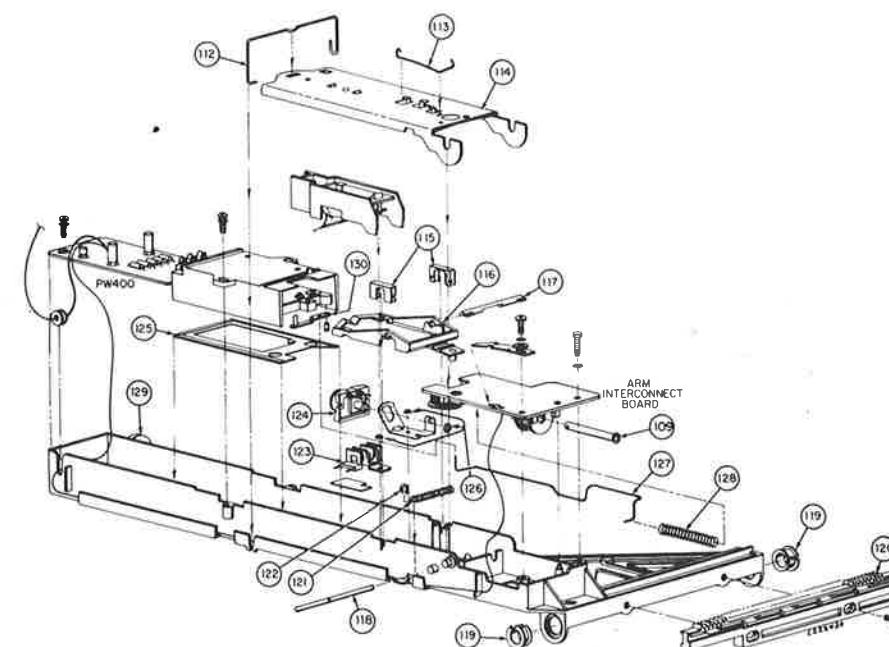


Fig. 49—Arm Assembly SJT 300

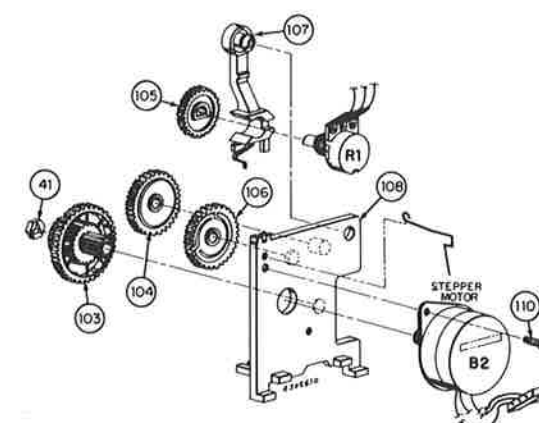


Fig. 50—Arm Drive Assembly SJT 100/200

REPLACEMENT PARTS

BEFORE REPLACING PARTS, READ THE FOLLOWING:

**RCA-Approved Substitute Stock Numbers**—Before ordering stock numbers in this parts list, look for an RCA-approved substitute stock number in the current *RCA Distributor & Special Products Price Schedule*. This will minimize your service time and avoid ordering parts you already have in stock.

See your RCA Distributor for Replacement Parts and Accessories.

**Warranty Status of Assemblies and Parts**—The warranty status of some assemblies and parts are indicated by one of the following Warranty Status Codes:

- Complete assembly not eligible for warranty exchange or replacement.
- † Eligible for warranty exchange for new or rebuilt unit.
- ‡ Complete assembly eligible for warranty replacement with new or rebuilt unit.

All parts listed without a Warranty Status Code symbol are eligible for warranty replacement as discrete components.

Warranty replacement of cabinet parts requires prior approval of RCA.

Warranty Status and Specifications of assemblies and parts are subject to change without notice.

**PRODUCT SAFETY NOTE**—Components marked with a (★) have special characteristics important to safety. Before replacing any of these components, read carefully the **PRODUCT SAFETY NOTICE** in the Basic Service Data. Do not degrade the safety of the set through improper servicing. Although assemblies as a whole may not be marked with a (★), replacement of RCA assemblies with other assemblies not RCA approved may result in a safety hazard.

**Canada Stock Numbers:**  
Add prefix 62 to all stock numbers.

- **Basic Service Data**—Chassis and tuning systems and most related parts and assemblies that do not differ from one model or model group to another.
- **Service Data Supplements**—Cabinet, auxiliary, and other parts and assemblies that differ from one model group to another.
- **Service Data Addendum**—Any parts additions, deletions, or other changes made after initial production.  
**Do not replace or order parts without first consulting any Addendum(s) that may have been issued since publication of this service data.**

.....AVOID REPLACEMENT PART ERRORS.....

File supplements and addendums immediately upon receipt, and consult the parts lists in them before ordering parts.

**NOTE:** For complete coverage of all parts and assemblies used in instruments equipped with the chassis series to which this service data relates, consult the following publications.

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
------------	-----------	-------------	-------------

SJT100/200/300

ELECTRICAL ASSEMBLIES & COMPONENTS

157928	2812587-501	● CIRCUIT, AC INPUT PW600
157925	2816408-501	● CIRCUIT, ARM INTERCONNECT SJT100
157926	2816408-502	● CIRCUIT, ARM INTERCONNECT SJT200/300
158005	2816404-501	● CIRCUIT, DISPLAY SJ200/300
157989	2816404-502	● CIRCUIT, DISPLAY SJT100
157924	2812585-501	● CIRCUIT, PICKUP PREAMP PW400
155877	2812595-501	‡ CIRCUIT, RESONATOR SJT100/200
155878	2812595-502	‡ CIRCUIT, RESONATOR SJT300

ELECTRICAL COMPONENTS

B1	156528	2816407-504	‡ MOTOR TURNTABLE DRIVE (CIRCUIT BOARD COMPLETE)
B2	154243	2872666-021	MOTOR ARM DRIVE
B3	155879	2816456-504	MOTOR FUNCTION DRIVE
BPF3101	157184	2861041-001	FILTER BAND-PASS
BPF4101	157184	2861041-001	FILTER BAND-PASS
BPF4102	157183	2861041-002	FILTER BAND-PASS SJT200/300
C1	145896	1491415-50R	CAPCD 4700PF M 50V
C401	143881	2841254-41M	CAPCD 2200PF M Z5P 50V
C402	147971	2841255-31M	CAPCD .01UF M Z5T 50V
C403	148057	2841253-92M	CAPCD 1000PF K Z5P 50V
C404	141868	2841273-163	CAP LYTC 1UF M 85C 50V
C405	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C406	146365	2841273-552	CAP LYTC 4.7UF N 35V
C407	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C408	148057	2841253-92M	CAPCD 1000PF K Z5P 50V
C409	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C410	148057	2841253-92M	CAPCD 1000PF K Z5P 50V
C601	157931	2870697-110	★ CAPCD 600PF M Z5T 1400V
C602	157931	2870697-110	★ CAPCD 600PF M Z5T 1400V
C603	157930	2841255-61N	CAPCD .015UF M Z5T 50V
C604	157930	2841255-61N	CAPCD .015UF M Z5T 50V
C605	157930	2841255-61N	CAPCD .015UF M Z5T 50V
C606	153654	1490303-451	CAP LYTC 3300UF R 35V
C607	149152	1490303-341	CAP LYTC 2200UF R 25V
C2001	146216	2840363-342	CAP LYTC 220UF 25V
C2002	112969	1490939-703	CAPCD .1UF Z Y5T 50V
C2003	153176	2871335-016	CAP POLY .33UF M 100V
C2004	143967	2841254-81M	CAPCD 4700PF M Z5P 50V
C2005	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C2501	147036	2840395-30N	CAPCT .010UF M Z5R 50V
C2503	147971	2841255-31M	CAPCD .01UF M Z5P 50V
C2504	147971	2841255-31M	CAPCD .01UF M Z5P 50V
C2505	147971	2841255-31M	CAPCD .01UF M Z5P 50V
C2506	143879	2841253-91M	CAPCD 1000PF M Z5P 50V
C2507	134939	2841255-50R	CAPCD .047UF Z Z5V 50V

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
------------	-----------	-------------	-------------

C2508	141868	2841273-163	CAP LYTC 1UF M 85C 50V
C2509	149205	2841274-353	CAP LYTC 22UF M 35V
C2510	146418	2841252-93A	CAPCD 180PF J NPO 50V
C2511	147971	2841255-31M	CAPCD .01UF M Z5P 50V
C2512	147971	2841255-31M	CAPCD .01UF M Z5P 50V
C2513	149189	993286-153	CAP POLY .15UF J 100V
C2514	147971	2841255-31M	CAPCD .01UF M Z5P 50V
C2515	147971	2841255-31M	CAPCD .01UF M Z5P 50V
C2516	148407	2841250-67A	CAPCD 33PF D NPO 50V
C2517	147971	2841255-31M	CAPCD .01UF M Z5P 50V
C2701	143866	2841251-83A	CAPCD 27PF J NPO 50V
C2702	143866	2841251-83A	CAPCD 27PF J NPO 50V
C2703	143866	2841251-83A	CAPCD 27PF J NPO 50V
C2705	143752	2840363-531	CAP LYTC 470UF R 16V SJT200/300
C3102	153576	2841253-53H	CAPCD 470PF J N750 50V
C3103	135452	2841253-13H	CAPCD 220PF J N750 50V
C3104	149164	2872860-113	CAP POLY .01UF K 50V
C3105	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C3106	143874	2841252-83H	CAPCD 150PF J N750 50V
C3107	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C3108	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C3109	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C3110	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C3111	146210	2841273-553	CAP LYTC 4.7UF M 85C 50V
C3112	147971	2841255-31M	CAPCD .01UF M Z5P 50V
C3117	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C3118	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C3119	143871	2841252-63H	CAPCD 100PF J N750 50V
C3120	145434	2841252-53H	CAPCD 82PF J N750 50V
C3121	143864	2841251-33A	CAPCD 10PF J NPO 50V
C3122	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C3123	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C3124	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C3125	146256	2841274-143	CAP LYTC 10UF M 25V
C3201	143871	2841252-63H	CAPCD 100PF J N750 50V
C3202	146833	2841251-93H	CAPCD 33PF J N750 50V
C3203	143874	2841252-83H	CAPCD 150PF J N750 50V
C3204	149203	2841275-143	CAP LYTC 100UF M 85C 25V
C3205	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C3206	143867	2841252-23A	CAPCD 47PF J NPO 50V
C3207	146768	2841251-53A	CAPCD 15PF J NPO 50V
C3208	135452	2841253-13H	CAPCD 220PF J N750 50V
C3209	146249	2841251-63A	CAPCD 18PF J NPO 50V
C3210	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C3211	143879	2841253-91M	CAPCD 1000PF M Z5P 50V
C3212	146249	2841251-63A	CAPCD 18PF J NPO 50V
C3213	146249	2841251-63A	CAPCD 18PF J NPO 50V
C3214	146833	2841251-93H	CAPCD 33PF J N750 50V
C3215	149196	2871417-001	CAP TRIM 40PF 250V
C3216	145434	2841252-53H	CAPCD 82PF J N750 50V
C3217	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C3218	149151	2841252-13A	CAPCD 39PF J NPO 50V
C3219	149204	2841274-442	CAP LYTC 33UF M 85C 25V
C3221	157206	2841287-563	CAP LYTC .22UF M 50V
C3222	143871	2841252-63H	CAPCD 100PF J N750 50V
C3223	103245	2841251-43A	CAPCD 12PF J NPO 50V
C3224	146768	2841251-53A	CAPCD 15PF J NPO 50V
C3225	143871	2841252-63H	CAPCD 100PF J N750 50V

REPLACEMENT PARTS

Replacement Parts Continued (See Product Safety Note on first page of this parts list)

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
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C3226	157205	2841250-82A	CAPCD 4.7PF K NPO 50V
C3227	143867	2841252-23A	CAPCD 47PF J NPO 50V
C3228	143879	2841253-91M	CAPCD 1000PF M Z5P 50V
C3229	157204	2841250-92A	CAPCD 5.6PF K NPO 50V
C3301	154336	2871335-083	CAP POLY .47UF K 100V
C3302	143967	2841254-81M	CAPCD 4700PF M Z5P 50V
C3303	148057	2840393-92M	CAPCT 1000PF K Z5P 50V
C3304	149161	2841274-243	CAP LYTC 15UF M 85C 25V
C3307	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C3308	153925	2872860-125	CAP POLY 0.1UF K 50V
C3309	146418	2841252-93A	CAPCD 180PF J NPO 50V
C3310	112969	1490939-703	CAPCD .1UF Z Y5T 50V
C3311	143874	2841252-83H	CAPCD 150PF J N750 50V
C3312	135452	2841253-13H	CAPCD 220PF J N750 50V
C3313	146210	2841273-553	CAP LYTC 4.7UF M 85C 50V
C3314	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C3315	143874	2841252-83H	CAPCD 150PF J N750 50V
C3316	147036	2840395-30N	CAPCT .010UF M Z5R 50V
C3317	146210	2841273-553	CAP LYTC 4.7UF M 85C 50V
C3318	147635	2841262-005	CAPCD 130PF J NPO 50V
C3319	135452	2841253-13H	CAPCD 220PF J N750 50V
C3320	157211	2872860-205	CAP POLY .0022UF J 50V
C3321	146210	2841273-553	CAP LYTC 4.7UF M 85C 50V
C3322	148057	2840393-92M	CAPCT 1000PF K Z5P 50V
C3323	146418	2841252-93A	CAPCD 180PF J NPO 50V
C3324	149147	2841262-006	CAPCD 300PF J N750 50V
C3325	146418	2841252-93A	CAPCD 180PF J NPO 50V
C3326	143874	2841252-83H	CAPCD 150PF J N750 50V
C3327	149203	2841275-143	CAP LYTC 100UF M 85C 25V
C3328	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C3329	146256	2841274-143	CAP LYTC 10UF M 25V
C3330	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C3331	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C3333	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C3335	146418	2841252-93A	CAPCD 180PF J NPO 50V
C3336	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C3401	135452	2841253-13H	CAPCD 220PF J N750 50V
C3402	145741	2841254-41N	CAPCD 2200PF M Z5T 50V
C3403	149163	2872860-017	CAP POLY .022UF M 50V
C3404	145434	2841252-53H	CAPCD 82PF J N750 50V
C3405	157215	2840394-22N	CAPCT 1500PF K Z5R 50V
C3406	142329	1490301-141	CAP LYTC 10UF R 25V
C3407	147036	2840395-30N	CAPCT .010UF M Z5R 50V
C3408	146254	2841262-004	CAPCD 91PF J NPO 50V
C3409	157204	2841250-92A	CAPCD 5.6PF NPO K 50V
C3410	142329	1490301-141	CAP LYTC 10UF R 25V
C3411	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C3412	157203	2841262-016	CAPCD 36PF J NPO 50V
C3413	149146	2841262-008	CAPCD 200PF J NPO 50V
C3414	145676	2841252-43A	CAPCD 68PF J NPO 50V
C3415	157203	2841262-016	CAPCD 36PF J NPO 50V
C3416	143879	2841253-91M	CAPCD 1000PF M Z5P 50V
C3417	157210	2872860-101	CAP POLY .001UF K 50V
C3418	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C3419	147971	2841255-31M	CAPCD .01UF M Z5P 50V
C3420	143879	2841253-91M	CAPCD 1000PF M Z5P 50V
C3421	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C3422	143866	2841251-83A	CAPCD 27PF J NPO 50V
C3423	135452	2841253-13H	CAPCD 220PF J N750 50V
C3424	157216	2871335-161	CAP POLY .33UF J 100V
C3425	148057	2840393-92M	CAPCT 1000PF K Z5P 50V
C3426	149188	2871335-129	CAP POLY .015UF J 100V
C3427	157209	2871335-157	CAP POLY .22UF J 100V
C3428	157208	2871335-151	CAP POLY .12UF J 100V
C3431	147036	2840395-30N	CAPCT .010UF M Z5R 50V
C3432	142329	1490301-141	CAP LYTC 10UF R 25V
C3433	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C3434	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C3435	148523	2840392-83J	CAPCT 150PF J NPO 50V
C3436	147971	2841255-31M	CAPCD .01UF M Z5P 50V
C3437	147971	2841255-31M	CAPCD .01UF M Z5P 50V
C3501	143879	2841253-91M	CAPCD 1000PF M Z5P 50V
C3502	143879	2841253-91M	CAPCD 1000PF M Z5P 50V
C3503	143885	2841262-010	CAPCD 110PF J NPO 50V
C3504	146254	2841262-004	CAPCD 91PF J NPO 50V
C3505	147036	2840395-30N	CAPCT .010UF M Z5R 50V
C3506	157201	2841253-23A	CAPCD 270PF J NPO 50V
C3507	157202	2841262-020	CAPCD 300PF J NPO 50V
C3508	157201	2841253-23A	CAPCD 270PF J NPO 50V
C3509	157202	2841262-020	CAPCD 300PF J NPO 50V
C3510	143866	2841251-83A	CAPCD 27PF J NPO 50V
C3511	143867	2841252-23A	CAPCD 47



REPLACEMENT PARTS

Replacement Parts Continued (See Product Safety Note on first page of this parts list)

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION	SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
C5103	157199	2841251-73A	CAPCD 22PF J NPO 50V	CR4102	119597	1471872-006	DIODE SJT200/300
C5104	134939	2841255-50R	CAPCD .047UF Z Z5V 50V	CR4201	119597	1471872-006	DIODE
C5105	146256	2841274-143	CAP LYTC 10UF M 25V	CR4202	119597	1471872-006	DIODE
C5106	149204	2841274-442	CAP LYTC 33UF N 85C 25V	CR4203	119597	1471872-006	DIODE SJT200/300
C5107	157207	2872860-023	CAP POLY .067UF M 50V	CR4204	119597	1471872-006	DIODE SJT200/300
C5108	141868	2841273-163	CAP LYTC 1UF M 85C 50V	CR4205	119597	1471872-006	DIODE SJT200/300
C5109	149203	2841275-143	CAP LYTC 100UF M 85C 25V	CR4401	119597	1471872-006	DIODE SJT200/300
C5110	149203	2841275-143	CAP LYTC 100UF M 85C 25V	CR4402	119597	1471872-006	DIODE SJT200/300
C5111	147971	2841255-31M	CAPCD .01UF M Z5P 50V	CR4403	119597	1471872-006	DIODE SJT200/300
C5112	147971	2841255-31M	CAPCD .01UF M Z5P 50V	CR4404	119597	1471872-006	DIODE SJT200/300
C5113	147971	2841255-31M	CAPCD .01UF M Z5P 50V	CR4405	119597	1471872-006	DIODE SJT200/300
C5114	147971	2841255-31M	CAPCD .01UF M Z5P 50V	CR4406	119597	1471872-006	DIODE SJT200/300
C5115	147971	2841255-31M	CAPCD .01UF M Z5P 50V	CR4407	119597	1471872-006	DIODE SJT200/300
C5116	147971	2841255-31M	CAPCD .01UF M Z5P 50V	CR4408	119597	1471872-006	DIODE SJT200/300
C5117	147971	2841255-31M	CAPCD .01UF M Z5P 50V	CR4501	119597	1471872-006	DIODE SJT200/300
C5119	147971	2841255-31M	CAPCD .01UF M Z5P 50V	CR4502	119597	1471872-006	DIODE SJT200/300
C5120	147971	2841255-31M	CAPCD .01UF M Z5P 50V	CR4503	119597	1471872-006	DIODE SJT200/300
C5121	147971	2841255-31M	CAPCD .01UF M Z5P 50V	CR4504	119597	1471872-006	DIODE SJT200/300
C5122	147971	2841255-31M	CAPCD .01UF M Z5P 50V	CR4505	119597	1471872-006	DIODE SJT200/300
C5123	147971	2841255-31M	CAPCD .01UF M Z5P 50V	CR4506	119597	1471872-006	DIODE SJT200/300
C5124	147971	2841255-31M	CAPCD .01UF M Z5P 50V	CR4507	119597	1471872-006	DIODE SJT200/300
C5125	147971	2841255-31M	CAPCD .01UF M Z5P 50V	CR5101	119597	1471872-010	DIODE
C5126	147971	2841255-31M	CAPCD .01UF M Z5P 50V	CR5102	119597	1471872-010	DIODE
C5127	143879	2841253-91M	CAPCD 1000PF M Z5P 50V	CR5103	119597	1471872-010	DIODE
C5128	134939	2841255-50R	CAPCD .047UF Z Z5V 50V	CR5104	119597	1471872-010	DIODE
C5129	143879	2841253-91M	CAPCD 1000PF M Z5P 50V	CR5106	119597	1471872-006	DIODE
C5130	143879	2841253-91M	CAPCD 1000PF M Z5P 50V	CR5107	119597	1471872-006	DIODE
C5131	147971	2841255-31M	CAPCD .01UF M Z5P 50V	CR5108	119597	1471872-006	DIODE
C5301	153925	2872860-125	CAP POLY 0.1UF K 50V	CR5110	119597	1471872-010	DIODE
C5302	134939	2841255-50R	CAPCD .047UF Z Z5V 50V	CR5111	119597	1471872-006	DIODE
C5303	143879	2841253-91M	CAPCD 1000PF M Z5P 50V	CR5112	119597	1471872-006	DIODE
C5304	143550	2841274-543	CAP LYTC 47UF M Z5U	CR5114	119597	1471872-010	DIODE
C5306	143878	2841253-62M	CAPCD 560PF K Z5P 50V	CR5115	119597	1471872-006	DIODE
C5901	134939	2841255-50R	CAPCD .047UF Z Z5V 50V	CR5116	119597	1471872-010	DIODE
C5902	132174	1474578-007	CAP TRIM 11PF NPO 500V	CR5301	119597	1471872-006	DIODE
C5903	146768	2841251-53A	CAPCD 15PF J NPO 50V	CR5302	119597	1471872-006	DIODE
C5904	145676	2841252-43A	CAPCD 68PF J NPO 50V	CR5901	119597	1471872-006	DIODE
C5905	146768	2841251-53A	CAPCD 15PF J NPO 50V	CR5902	119597	1471872-006	DIODE
C5906	134939	2841255-50R	CAPCD .047UF Z Z5V 50V	CR5903	119597	1471872-006	DIODE
C5907	143879	2841253-91M	CAPCD 1000PF M Z5P 50V	CR5904	119597	1471872-006	DIODE
C5908	147036	2840395-30N	CAPCT .010UF M Z5R 50V	CR5905	119597	1471872-006	DIODE
C5909	147036	2840395-30N	CAPCT .010UF M Z5R 50V	CR5906	119597	1471872-006	DIODE
C5910	146256	2841274-143	CAP LYTC 10UF M 25V	CR5907	119597	1471872-006	DIODE
C5911	147971	2841255-31M	CAPCD .01UF M Z5P 50V	CR5921	147015	99203-003	DIODE
C5912	147971	2841255-31M	CAPCD .01UF M Z5P 50V	CR5922	119597	1471872-006	DIODE
C5913	147971	2841255-31M	CAPCD .01UF M Z5P 50V	CR5923	119597	1471872-010	DIODE
C5914	147971	2841255-31M	CAPCD .01UF M Z5P 50V	CR5931	147015	99203-003	DIODE
C5915	134939	2841255-50R	CAPCD .047UF Z Z5V 50V	CR5932	119597	1471872-006	DIODE
C5916	134939	2841255-50R	CAPCD .047UF Z Z5V 50V	CR5933	119597	1471872-010	DIODE
C5917	147971	2841255-31M	CAPCD .01UF M Z5P 50V	CR5941	147015	99203-003	DIODE
C5918	147971	2841255-31M	CAPCD .01UF M Z5P 50V	CR5942	119597	1471872-006	DIODE
C5919	147971	2841255-31M	CAPCD .01UF M Z5P 50V	CR5943	119597	1471872-010	DIODE
C5920	149204	2841274-442	CAP LYTC 33UF N 85C 25V	CR5944	147015	99203-003	DIODE
C5921	157196	2841255-41L	CAPCD .022UF M Y5R 50V	CR5952	119597	1471872-006	DIODE
C5922	134939	2841255-50R	CAPCD .047UF Z Z5V 50V	CR5953	119597	1471872-010	DIODE
C5931	157196	2841255-41L	CAPCD .022UF M Y5R 50V				
C5941	157196	2841255-41L	CAPCD .022UF M Y5R 50V	DS1701	149020	2840935-001	LED DISPLAY
C5951	157196	2841255-41L	CAPCD .022UF M Y5R 50V				
CR101	119597	1471872-006	DIODE	E3201	153328	2843165-004	BEAD
CR601	147015	99203-206	DIODE	E3301	153328	2843165-004	BEAD
CR602	147015	99203-206	DIODE	E3302	153328	2843165-004	BEAD
CR603	147015	99203-206	DIODE	E3303	153328	2843165-004	BEAD
CR604	147015	99203-206	DIODE	E3501	153328	2843165-004	BEAD
CR605	147015	99203-206	DIODE	E3502	153328	2843165-004	BEAD
CR606	147015	99203-206	DIODE	E3503	153328	2843165-004	BEAD
CR607	147015	99203-206	DIODE	E3504	153328	2843165-004	BEAD
CR608	147015	99203-206	DIODE				
CR609	119597	1471872-006	DIODE	F601	156261	2840454-506	* FUSE 0.6A
CR610	119597	1471872-006	DIODE	HE1	157638	2816248-001	TRANSISTOR HALL EFFECT
CR611	119597	1471872-006	DIODE	HE2	157638	2816248-001	TRANSISTOR HALL EFFECT
CR1701	157637	1466679-013	DIODE LED SIDE 1				
CR1702	157637	1466679-013	DIODE LED SIDE 2	J4	149208	1466404-001	CONNECTOR
CR1703	157637	1466679-013	DIODE LED AUD A SJT200/300	J6	149208	1466404-001	CONNECTOR
CR1704	157637	1466679-013	DIODE LED AUD B SJT200/300	J11	158021	2861623-004	CONNECTOR
CR1705	157637	1466679-013	DIODE LED STEREO SJT200/300	J101	158696	2873321-002	CONNECTOR 7 PIN SJT100
CR2009	119597	1471872-010	DIODE	J101	158697	2873321-001	CONNECTOR 8 PIN SJT200/300
CR2501	119597	1471872-010	DIODE	J2701	157182	2816401-504	JACK VIDEO W/BRACKET SJT200/300
CR3101	119597	1471872-010	DIODE				
CR3102	119597	1471872-010	DIODE	J4601	157181	2816401-503	JACK AUDIO W/BRACKET SJT200/300
CR3401	119597	1471872-010	DIODE				
CR3402	119597	1471872-010	DIODE	J4602	157189	2816401-503	JACK AUDIO W/BRACKET SJT200/300
CR3403	119597	1471872-010	DIODE				
CR3501	149033	1477074-002	DIODE	L101	158695	2861409-001	COIL
CR3502	129095	1477022-002	DIODE	L102	157938	2812595-506	COIL ARM STRETCHER
CR3503	129095	1477022-002	DIODE	L103	157936	2831713-001	COIL SKIPPER
CR3504	129095	1477022-002	DIODE	L104	157934	2861415-001	COIL SWEEPER SJT300
CR3505	129095	1477022-002	DIODE	L601	157929	2873085-001	* COIL LINE CHOKE
CR3506	129095	1477022-002	DIODE	L2701	153921	2841228-219	COIL 33UH
CR4001	119597	1471872-006	DIODE SJT200/300	L3105	149171	2841228-234	COIL 560UH
CR4002	119597	1471872-006	DIODE SJT200/300				

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REPLACEMENT PARTS

Replacement Parts Continued (See Product Safety Note on first page of this parts list)

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION	SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
L3201	149173	2841228-221	COIL 47UH	Q3408	149041	1417351-002	TRANSISTOR XDCR DRIVER
L3202	154050	2841228-220	COIL 39UH	Q3409	146847	1417306-013	TRANSISTOR VIDEO BLANKER
L3203	149170	2841228-112	COIL 8.2UH	Q3412	151326	1417360-001	TRANSISTOR NOISE CORING AMP
L3204	149171	2841228-234	COIL 560UH	Q3413	146847	1417306-013	TRANSISTOR NOISE CORING AMP
L3205	149173	2841228-221	COIL 47UH	Q3501	149040	1417387-001	TRANSISTOR BIAS SWITCH
L3206	149176	2841228-217	COIL 22UH	Q4102	146847	1417306-013	TRANSISTOR DECODER DEFEAT
L3207	149173	2841228-221	COIL 47UH				SJT200/300
L3208	149175	2841228-214	COIL 12UH	Q4301	146847	1417306-013	TRANSISTOR LEFT CH BUFFER
L3301	149167	2841228-223	COIL 68UH				SJT200/300
L3302	149167	2841228-223	COIL 68UH	Q4302	146847	1417306-013	TRANSISTOR RIGHT CH BUFFER
L3303	149176	2841228-217	COIL 22UH				SJT200/300
L3304	149168	2841228-224	COIL 82UH	Q4501	149040	1417387-001	TRANSISTOR CURRENT SOURCE
L3305	149176	2841228-217	COIL 22UH	Q5101	145776	1417303-003	TRANSISTOR LS DIGIT DRIVER
L3306	149176	2841228-217	COIL 22UH	Q5102	145776	1417303-003	TRANSISTOR MS DIGIT DRIVER
L3401	149177	2841271-001	COIL 36UH	Q5103	146847	1417306-013	TRANSISTOR DAXI STATUS
L3402	157189	1467370-005	COIL 62UH				INVERTER
L3403	157190	1467370-006	COIL 20UH	Q5104	145395	1417318-007	TRANSISTOR STEPPER OUTPUT
L3404	149176	2841228-217	COIL 22UH	Q5105	146847	1417306-013	TRANSISTOR STEPPER DRIVER
L3405	149175	2841228-214	COIL 12UH	Q5106	149041	1417351-002	TRANSISTOR STEPPER OUTPUT A
L3501	157191	2873326-002	COIL .069UH	Q5107	145395	1417318-007	TRANSISTOR STEPPER OUTPUT B
L3502	157191	2873326-002	COIL .069UH	Q5108	146847	1417306-013	TRANSISTOR LIFTER DRIVE
L3503	157192	2873326-011	COIL 0.52UH	Q5109	149041	1417351-002	TRANSISTOR LIFTER OUTPUT
L3504	157192	2873326-011	COIL 0.52UH	Q5110	146847	1417306-013	TRANSISTOR VERT DETAIL DRIVE
L3505	157194	2872884-002	COIL 0.22UH	Q5111	146847	1417306-013	TRANSISTOR STEPPER DRIVE C
L3506	157193	2873326-016	COIL .235UH	Q5112	149041	1417351-002	TRANSISTOR STEPPER OUTPUT C
L3507	157193	2873326-016	COIL .235UH	Q5113	145776	1417303-003	TRANSISTOR LED DISPLAY
L3508	157194	2872884-002	COIL 0.22UH				SELECT
L3509	157188	1467370-001	COIL 10UH	Q5114	145776	1417303-003	TRANSISTOR DISCRETE LED
L3511	157195	1496280-003	COIL .33UH				SELECT
L4107	153920	2843031-001	COIL 18MH	Q5115	146847	1417306-013	TRANSISTOR LOW VOLTAGE DET
L4108	153920	2843031-001	COIL 18MH SJT200/300	Q5116	146847	1417306-013	TRANSISTOR RESET SWITCH
L5101	157187	2872884-017	COIL 5.6UH	Q5301	146847	1417306-013	TRANSISTOR REV RAMP SWITCH
L5901	157187	2872884-017	COIL 5.6UH	Q5302	146847	1417306-013	TRANSISTOR FWD RAMP SWITCH
				Q5303	146847	1417306-013	TRANSISTOR KICK PULSE DRIVER
				Q5304	145776	1417303-003	TRANSISTOR KICK PULSE DRIVER
				Q5305	140129	1417327-004	TRANSISTOR KICK PULSE
P1	158674	2861623-109	CONNECTOR 9 PIN				OUTPUT
P2	158675	2861084-204	CONNECTOR 4 PIN				TRANSISTOR KICK PULSE
P3	158019	2861623-010	CONNECTOR 10 PIN SJT100				OUTPUT
P3	158020	2861623-011	CONNECTOR 11 PIN SJT200/300	Q5306	140130	1417328-003	TRANSISTOR KICK PULSE
P4	158673	2861084-102	CONNECTOR 2 PIN				OUTPUT
P5	158676	2861084-105	CONNECTOR 5 PIN	Q5901	140129	1417327-004	TRANSISTOR REV FUNCTION SW
P6	158673	2861084-102	CONNECTOR 2 PIN				(late production)
P9	158673	2861084-102	CONNECTOR 2 PIN	Q5901	158289	1417327-005	TRANSISTOR REV FUNCTION SW
P11	158021	2861623-004	CONNECTOR 4 PIN				(early production)
P101	157856	1467740-061	CONNECTOR 7 PIN SJT100/200	Q5902	146847	1417306-013	TRANSISTOR FUNC DR REV
P101	157525	1467740-071	CONNECTOR 8 PIN SJT300	Q5903	140129	1417327-004	TRANSISTOR FWD FUNCTION SW
P1101	157524	2861623-107	CONNECTOR 7 PIN SJT300				(late production)
P5601	157525	1467740-071	CONNECTOR 8 PIN	Q5903	158289	1417327-005	TRANSISTOR FWD FUNCTION SW
							(early production)
Q101	145395	1417318-007	TRANSISTOR SWEEP SJT300	Q5904	146847	1417306-013	TRANSISTOR FUNC DR FWD
Q102	146847	1417306-013	TRANSISTOR INVERTER SJT300	Q5905	145395	1417318-007	TRANSISTOR FUNC MTR OUTPUT
Q401	151326	1417360-001	TRANSISTOR GAIN STAGE				FWD
Q402	151326	1417360-001	TRANSISTOR OUTPUT DRIVER	Q5906	145395	1417318-007	TRANSISTOR FUNC MTR OUTPUT
Q403	143794	1417306-012	TRANSISTOR AFT AMP				REV
Q404	143794	1417306-012	TRANSISTOR AFT REF AMP	Q5907	145776	1417303-003	TRANSISTOR PAUSE LINE BUFFER
Q405	156262	1417382-002	TRANSISTOR SEARCH OSC	Q5908	146847	1417306-013	TRANSISTOR SW DRIVER REV
Q2001	155882	1417422-001	TRANSISTOR REGULATOR				(late production)
Q2002	145776	1417303-003	TRANSISTOR CURRENT LIMITER	Q5909	146847	1417306-013	TRANSISTOR SW DRIVER FWD
Q2003	146847	1417306-013	TRANSISTOR DRIVER				(late production)
Q2004	145395	1417318-007	TRANSISTOR REGULATOR	Q5921	140130	1417328-003	TRANSISTOR CURRENT SOURCE
Q2005	140979	1417364-001	TRANSISTOR REGULATOR				SW
Q2006	146847	1417306-013	TRANSISTOR CURRENT LIMITER	Q5922	146847	1417306-013	TRANSISTOR DRIVE AMP
Q2007	146847	1417306-013	TRANSISTOR CURRENT LIMITER	Q5923	140129	1417327-004	TRANSISTOR TURNTABLE MOTOR
Q2501	146847	1417306-013	TRANSISTOR RF AMP				DRIVER B
Q2502	146847	1417306-013	TRANSISTOR OUTPUT DET SW	Q5931	140130	1417328-003	TRANSISTOR CURRENT SOURCE
Q2503	146847	1417306-013	TRANSISTOR OUTPUT DET SW				SW
Q2504	150247	1417411-003	TRANSISTOR GAIN CONTROL	Q5932	146847	1417306-013	TRANSISTOR DRIVE AMP
Q2505	145776	1417303-003	TRANSISTOR AGC AMP	Q5933	140129	1417327-004	TRANSISTOR TURNTABLE MOTOR
Q2506	145776	1417303-003	TRANSISTOR SYNC STRIPPER				DRIVER A
Q2507	146847	1417306-013	TRANSISTOR CLAMP	Q5941	140130	1417328-003	TRANSISTOR CURRENT SOURCE
Q2701	146847	1417306-013	TRANSISTOR VIDEO DRIVER				SWITCH
Q3101	146847	1417306-013	TRANSISTOR N-LAC BUFFER	Q5942	146847	1417306-013	TRANSISTOR DRIVE AMP
Q3102	149040	1417387-001	TRANSISTOR N-LAC AMP	Q5943	140129	1417327-004	TRANSISTOR TURNTABLE MOTOR
Q3103	146847	1417306-013	TRANSISTOR N-LAC AMP				DRIVER B
Q3104	146847	1417306-013	TRANSISTOR N-LAC OUT DRIVER	Q5951	140130	1417328-003	TRANSISTOR CURRENT SOURCE
Q3105	146847	1417306-013	TRANSISTOR 716KHZ AMP				SW
Q3107	146847	1417306-013	TRANSISTOR CONTROL AMP	Q5952	146847	1417306-013	TRANSISTOR DRIVE AMP
Q3201	146847	1417306-013	TRANSISTOR PHASE CORRECTION	Q5953	140129	1417327-004	TRANSISTOR TURNTABLE MOTOR
							DRIVER C
Q3202	146847	1417306-013	TRANSISTOR VIDEO BUFFER				
Q3301	146847	1417306-013	TRANSISTOR DELAY VIDEO DRIVE	R1	156333	2872667-003	RES CONTROL RADIUS SENSE
Q3303	146847	1417306-013	TRANSISTOR VERT DETAIL	R401	153030	993113-203	* RES MFFP1/4W 5% 120R
Q3304	146847	1417306-013	TRANSISTOR CHROMA DRIVER	R411	829311	993218-722	RES CF 1/4W 2% 11K
Q3305	145776	1417303-003	TRANSISTOR CHROMA BUFFER	R412	829222	993218-705	RES CF 1/4W 2% 2200R
Q3306	146847	1417306-013	TRANSISTOR LUMA BUFFER	R414	829010	993218-349	RES CF 1/4W 5% 100R
Q3401	146847	1417306-013	TRANSISTOR VIDEO BUFFER	R417	829022	993113-185	* RES MFFP1/4W 5% 22R
Q3402	146847	1417306-013	TRANSISTOR VIDEO AMP	R601	502547	82283-106	RES CC 1/2W 10% 4.7M
Q3403	146847	1417306-013	TRANSISTOR CLK PHASE SHIFTER	R2002	830B56	993291-319	* RES MF 1/2W 5% .56R
Q3404	146847	1417306-013	TRANSISTOR CLOCK BUFFER	R2003	830B56	993291-319	* RES MF 1/2W 5% .56R
Q3405	146847	1417306-013	TRANSISTOR XDCR DRIVER	R2005	829156	993113-219	* RES MFFP 1/4W 5% 560R
Q3406	149041	1417351-002	TRANSISTOR XDCR DRIVER	R2006	157214	990401-416	RES MF 1/4W 1% 14.3K
Q3407	146847	1417306-013	TRANSISTOR XDCR DRIVER	R2007	157213	990401-401	RES MF 1/4W 1% 10K



## REPLACEMENT PARTS

**Replacement Parts Continued** (See Product Safety Note on first page of this parts list)

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION	SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
	157991	2861416-001	COVER, TOP RF MOD	71	157603	2873091-002	SPRING, DISC GROUND
	157534	2844019-001	GROMMET, STRAIN RELIEF POWER CORD	72	155880	2816455-501	TURNTABLE
	143813	1442970-007	INSULATOR, FOR Q2005	73	157864	2861400-013	SCREW
	158001	2861422-001	SHIELD, MICROPROCESSOR	74	157556	2873369-002	SPACER
	158003	2816401-505	SHIELD, COMB FILTER	75	158670	2840736-004	GROMMET
	158022	2873023-101	TERMINAL, SOLDERLESS	76	157853	2873042-002	BRACKET, SWITCH
				77	157805	2816456-502	ARM, SWEEPER ASSEMBLY
				78	157606	2816456-506	ARM, LOCK 1 PAIR
				79	157544	2873047-002	SHAFT, ARM CARRIAGE
				80	157927	2861434-002	SHIELD, ESD
				81	157551	2873347-001	SUPPORT, CENTER MASTER BOARD
							SPRING, TRANSFER ROD
1	157865	2831493-002	* CABINET, TOP SJT100	82	157527	2843655-001	NUT
1	157866	2831493-001	* CABINET, TOP SJT200	83	149084	90303-086	PLATE, FILLER
1	157867	2831493-003	* CABINET, TOP SJT300	84	157532	2844001-002	BRACKET, DISPLAY HOLDDOWN
2	158241	2816230-119	SCREW	85	157550	2873335-003	SCREW
3	157868	2873332-003	ROD, DOOR PUSH	86	157996	2861400-012	COVER, SWITCH
4	157862	2861423-002	COVER, CABLE	87	157554	2873356-001	SPACER, SWITCH
5	157566	2873364-001	SPRING, POWER BUTTON	88	157547	2873323-001	SHIELD, POWER SWITCH
6	157863	2873405-001	NUT, PUSH	89	157539	2861408-001	CAP, POWER SWITCH
7	157846	2861019-001	BUTTON, POWER SWITCH SJT200/300	90	157540	2861424-002	SCREW
			BUTTON, POWER SWITCH SJT100	91	157997	2843605-001	SPRING, SWEEPER EXTENSION
8	157847	2831482-004	* CABINET, FRONT SJT100/200	92	157533	2844007-001	CLIP, GROUNDING
9	158239	2831482-002	* CABINET, FRONT SJT300	93	157870	2844022-002	COVER, BOTTOM
9	157580	2861032-002	PIVOT, DISC (LEFT)	94	157526	2831703-001	BUSHING, BASE PAN
10	157858	2816456-508	DOOR, CADDY	95	157558	2873377-001	FOOT, PAD
11	157859	2831471-002	BUTTONS, 7 FUNCTION SJT200/300	96	157552	2873349-002	PLATE, REINFORCING
			BUTTONS, 6 FUNCTION SJT100	97	157536	2844048-001	NUT, ADJUSTING
11	157860	2831724-002	PANEL, FRONT ASSEMBLY SJT100	98	157546	2873302-002	SCREW, HEIGHT ADJUSTMENT
12	158685	2816419-502	PANEL, FRONT ASSEMBLY SJT200	99	157530	2843689-002	WASHER, GUARD ADJ NUT
12	158686	2816419-501	PANEL, FRONT ASSEMBLY SJT300	100	157559	2873389-001	PANEL, SJT100
12	158687	2816419-503	PANEL, FRONT ASSEMBLY SJT200	101	157850	2861433-003	PANEL, SJT200/300
13	157579	2861032-001	PIVOT, DISC (RIGHT)	102	157851	2861433-002	PLATE, THRUST
14	157578	2844064-001	CLIP, GROUND	103	157598	2873065-003	GEAR, 3RD REDUCTION
15	157522	2831443-001	SPINDLE, RECEIVER	104	157597	2873011-001	GEAR, 2ND REDUCTION
16	157565	2843699-001	WIRE, CAMSIDE REC	105	157601	2843624-001	GEAR
17	157590	2873329-002	COVER, GEAR	106	157596	2873064-001	GEAR, 1ST REDUCTION
18	157592	2873380-002	BELT	107	157600	2861047-001	LEVER
19	157584	2861432-001	PULLEY, & GEAR 1ST REDUCTION	108	157609	2861050-002	BRACKET
20	157560	480366-005	RETAINER, RING	109	157937	2812595-507	PLUNGER
21	157576	2861026-002	GEAR, & PINION	110	157998	93600-115	SCREW
22	157585	2873003-001	GEAR, POWER ASSIST	111	157647	2812593-501	● ARM, PICKUP LESS CARTRIDGE SJT100/200
23	157573	2844062-001	WASHER, SHIM				● ARM, PICKUP LESS CARTRIDGE SJT300
24	157608	2831483-003	RAIL	112	157648	2812593-502	LATCH
25	155094	93610-105	WASHER	113	157876	2873068-001	SPRING, LIFTER LOCK
26	157567	2844008-004	SPRING, SIDE REC	114	157883	2873337-002	COVER, CARTRIDGE
27	157589	2873307-001	LATCH, SIDE RECEIVER	115	157875	2812595-505	CLIP
28	157564	2843631-001	SPRING, CADDY LOCKOUT	116	157877	2873083-001	LIFTER, ACTUATOR ASSEMBLY
29	157575	2861014-001	ARM, LOCKOUT CADDY LEFT	117	157886	2812595-504	SHAFT, LIFTER
30	155099	2841782-001	SCREW	118	157882	2873072-001	PLUNGER, LOCK
31	157545	2873055-004	HUB, ASSEMBLY POWER ASSIST	119	157888	2844023-002	BEARING
32	157586	2873004-001	SHAFT, HUB POWER ASSIST	120	157874	2873374-001	RACK, STEPPER DRIVER
33	157581	2861038-001	ROD, FRT REC ACTIVATING	121	157881	2861049-002	SPRING, LOCK
34	157570	2844037-003	SPRING, EXT PAWL CAM	122	157890	2843659-004	RETAINER, E-RING
35	157583	2861095-001	ACTUATOR, RECEIVER	123	157889	93605-402	COIL, KICKER/SKIPPER
36	157946	2873027-002	CAM	124	157936	2831713-001	COIL, ARM STRETCHER
37	157945	2873043-002	ROD		157938	2812595-506	ASSEMBLY
38	157543	2873024-001	COUPLING, TRANSFER ROD	125	157878	2873088-001	GASKET, GROUNDING
39	157563	2816453-504	GEAR, FUNCTION ASSEMBLY	126	157879	2844073-001	RETAINER, PUSH-ON
40	157577	2861029-002	GEAR, PAWL DRIVE	127	157887	2861088-001	ACTUATOR, SWEEPER
41	157568	2844015-001	NUT, PUSH	128	157891	2843659-003	SPRING, SWEEPER PLUNGER
42	157588	2873026-001	ACTUATOR, ARM REAR REC	129	157884	2873312-001	ROLLER
43	157836	2816453-507	RAIL	130	157885	2812595-503	ARM, SWEEPER
44	157571	2844055-001	SHIELD, SWITCH				
45	157599	2861400-001	SCREW		157535	2844046-001	CLAMP, IR REMOTE SJT300
46	157574	2861013-001	ARM, LOCKOUT CADDY RIGHT		157521	1490104-004	RETAINER, WIRE TOP LOCKING
47	157538	2861085-002	ACTUATOR, MECHANISM OFF		157555	2873363-001	RETAINER, WIRE SIDE LOCKING
48	157548	2873324-001	SPRING, OFF ACTUATOR				
49	157572	2844057-001	INSERT, FRONT REC PAD				
50	157587	2873021-003	CRANK, DOOR STOP				
51	157562	2831466-002	PAD, REC FRONT				
52	157569	2844031-001	SPACER, SPINE HOLDDOWN				
53	157582	2861057-001	ROD, OLD DOWN SPINE				
54	158000	2843632-001	SPRING				
55	157871	2873392-001	STOP, CADDY MISALIGNMENT				
56	157591	2873348-001	BLOCK, LIFTER LOCK				
57	157529	2843660-001	SPRING, TORSION READ PAD	PW900	155881	2816416501	‡ CIRCUIT REMOTE PREAMP
58	157542	2873016-001	SPRING, SPINE LATCH				
59	157610	2873016-002	SPRING, SPINE LATCH	C901	145676	2841252-42H	CAPCD 68PF K N750 50V
60	157537	2861005-139	LATCH, ASSEMBLY	C902	149200	2841273-161	CAP LYTC 1UF R 85C 50V
61	157531	2843697-003	CLIP, SPACER	C903	148057	2841253-92M	CAPCD 1000PF K Z5P 50V
62	157523	2831467-001	PAD, REAR RECEIVER	C904	146418	2841252-92H	CAPCD 180PF K N750 50V
63	157541	2873013-001	GEAR, LOWER POWER ASSIST	C905	155090	2841254-22M	CAPCD 1500PF K Z5P 50V
64	157528	2843656-002	SPRING, SPINE PUSHBACK	C906	143867	2841252-22H	CAPCD 47PF K N750 50V
65	157604	2816456-503	ROD, TRANSFER ASSEMBLY	C907	146211	2841274-141	CAP LYTC 10UF R 85C 25V
66	157549	2873334-001	SHIELD, AC BOARD	C909	146211	2841274-141	CAP LYTC 10UF R 85C 25V
67	157854	2831487-002	PLATE, SWITCH MTG				
68	153026	93605-106	RETAINER	CR901	119597	1471872-006	DIODE
69	157602	2861068-002	SPINDLE, TURNTABLE	CR902	150711	2815416-001	DIODE PHOTO
70	157999	2873092-002	SPRING	CR903	119597	1471872-006	DIODE

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## REPLACEMENT PARTS

Replacement Parts Continued (See Product Safety Note on first page of this parts list)

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION	SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
L901	148068	1445867-006	COIL 55MH	Q1001	142686	1417346-001	TRANSISTOR CRK34D
Q901	148070	1417411-001	TRANSISTOR	Q1002	148061	1417333-002	TRANSISTOR CRK34C
Q902	145410	1417330-011	TRANSISTOR	Q1002	142686	1417346-001	TRANSISTOR CRK34D
Q903	148061	1417333-002	TRANSISTOR	Q1003	145395	1417318-007	TRANSISTOR CRK34D
R919	155086	1468990-001	RES NETWORK	Q1003	153343	1417318-008	R TRANSISTOR CRK34C
	133319	938316-013	GROMMET	T1001	153344	2860715-001	TRANSFORMER
REMOTE AMPLIFIER					155119	1497019-001	BATTERY, 1.5V AA
PW1100	158004	2816405501	• CIRCUIT REMOTE AMP		155118	1497000-001	BUTTON, DUAL
C1101	146256	2841274-143	CAP LYTC 10UF M 25V		153339	2843202-501	CASE, BOTTOM W/LENS
C1102	145316	2841252-33H	CAPCD 56PF J N750 50V		158038	2831260-011	CASE, TOP CRK34C
C1103	139444	2871335-075	CAP POLY .1UF K 100V		158012	2831260-012	CASE, TOP CRK34D
C1104	149161	2841274-242	CAP LYTC 15UF N 25V		158017	2842241-512	CIRCUIT, SWITCH CONTACT
C1105	155097	2871335-001	CAP POLY 1000PF M 100V		153346	1497017-001	CONTACT, DUAL BATTERY
C1106	155097	2871335-001	CAP POLY 1000PF M 100V		153347	1497018-001	CONTACT, SINGLE BATTERY
C1107	143882	2841255-30M	CAPCD .01UF Z Z5P 50V		153340	2831268-001	DOOR, BATTERY CRK33C
C1108	134939	2841255-50R	CAPCD .047UF Z Z5V 50V		157177	2831268-022	DOOR, BATTERY CRK33D
C1109	134939	2841255-50R	CAPCD .047UF Z Z5V 50V		153348	2843210-001	PAD, ANTI SKID
CR1101	119597	1471872-006	DIODE		129796	1444961-001	SPRING, BATTERY CONTACT
CR1103	119597	1471872-006	DIODE	STYLUS CARTRIDGE			
P1102	158021	2861623-004	CONNECTOR 4 PIN	154216	2816412-501		CARTRIDGE, VIDEO PICKUP
Q1101	148061	1417333-002	TRANSISTOR	TOOLS & LUBES			
R1101	829110	993113-201	★ RES MFFP 1/4W 5% 100R	149073	2812522-503	• CADDY, LESS DISC	
U1101	154488	1421785-001	IC	153394		DISC, STEREO ALIGNMENT	
U1102	154487	1421784-001	IC	156529		GAUGE, TURNTABLE HEIGHT	
Y1101	154489	1422271-003	CRYSTAL, 632KHZ	149053	2811825-002	LUBRICANT, OIL	
				149247	2811870-001	LUBRICANT, RYKON	
				151303		• TOOL, HEX 2.5MM	
REMOTE TRANSMITTER				INCLUDED ACCESSORIES			
			CRK34C,D	AH011	2871056-001	ADAPTER, 75 OHM COAX TO 300 OHM	
						TWIN LEAD OUTPUT	
				AH018	2871464-001	ADAPTER, 75 to 300 OHM w/90 DEGREE	
157164	1457636-503	‡ TRANSMITTER, REMOTE CRK34C				PUSH-ON COAX CONNECTOR	
157233	1457636-504	‡ TRANSMITTER, REMOTE CRK34D				BATTERIES, 1.5V AA SJT300	
		LATE VERSION				BOOK, INSTRUCTION SJT100	
C1001	155457	2813595-007	CAPCM 560PF J NPO 100V			BOOK, INSTRUCTION SJT200	
C1002	143882	1491409-32M	CAPCD .01UF K Z5P 50V			BOOK, INSTRUCTION SJT300	
C1003	145896	1491409-50R	CAPCD .047UF Z Z5V 50V			CABLE, STEREO SJT200/300	
CR1001	148056	2811593-001	DIODE	153938	2872677-001	CABLE, RF	
CR1001	153342	2811593-002	DIODE LED	AH004	2873052-001	CARD, SIMPLIFIED INSTRUCTIONS	
CR1002	148056	2811593-001	DIODE LED CRK34C		28177356-001	SJT100	
CR1002	153342	2811593-002	DIODE LED CRK34D			CARD, SIMPLIFIED INSTRUCTIONS	
CR1003	148056	2811593-001	DIODE			SJT200	
CR1004	119597	1471872-006	DIODE			CARD, SIMPLIFIED INSTRUCTIONS	
P1001	154364	2831318-022	CONNECTOR W/CONTACTS			SJT300	
PW1000	155277	1458786-502	CIRCUIT COMPLETE CRK34C	AH010	2871472-001	TERMINAL, 300 OHM CABLE	
PW1000	158018	1458786-504	CIRCUIT COMPLETE CRK34D			EXTENSION 5 FEET	
Q1001	148061	1417333-002	TRANSISTOR CRK34C	157164	1457636-503	‡ TRANSMITTER, REMOTE CRK34C	
						EARLY VERSION	
				157233	1457636-504	‡ TRANSMITTER, REMOTE CRK34D	
						LATE VERSION	





FILE  
1983  
SJT 100/200/300  
Addendum—1

# SelectaVision® VideoDisc System CED Addendum Service Data

## Model SJT 090/ 100/101/200/300

**RCA Corporation**  
**Consumer Electronics**  
**Technical Publications**  
P.O. Box 1976 | Indianapolis, Indiana 46206

**RCA Inc.**  
**Technical Publications**  
5575 Royalmount Avenue | Town of Mount-Royal | Quebec, Canada H4P 1J8

Canada Stock Numbers:  
Add prefix 62 to all stock numbers.

**Purpose of This Addendum:** Update Basic Service Data to cover latest product design and provide Troubleshooting Guides.

**Filing instructions:** File this addendum immediately in front of 1983 SJT 100/200/300 Basic Service Data.

### SUMMARY OF ADDITIONS/CHANGES COVERED BY THIS ADDENDUM

Original Service Data Contents	Page(s)	Additions/Changes in this Addendum	Page(s)
Instrument Disassembly	16 & 21	Revised Procedure	2
Electrical Adjustments	24	Order of Adjustment	2
Waveforms	36	Waveform No. 35	2
Interconnect Wiring Diagram	39 & 40	Add Capacitor	2
Power Supply Schematic	50	Delete Capacitor	2
Schematic Diagrams	42 thru 47	Component Value Changes	2
Replacement Parts	64 thru 70	Stock No. Changes and Deletions	3
		Stylus Lifter Alignment	2
		Troubleshooting Guides	4 thru 12

## Instrument Disassembly pgs. 16 & 21

### Turntable Height Adjust Step 1 Should Read

1. If gauge plunger remains on lowest step—raise turntable height by adjusting height adjust screw (Item 99, Fig. 47) clockwise.

### Turntable Removal Step 1. Should Read

1. With cabinet top, receiver spindle assembly and guide rail bracket removed—use thumb to rotate mechanism drive 2nd reduction gear (Fig. 16) in a clockwise direction to place mechanism in "PLAY" mode while holding AC switch (S2) actuator (Item 47, Fig. 47) back out of the way. Immediately stop rotating mechanism 2nd reduction gear when Disc transfer Rod Coupler (Item 38, Fig. 47) activates "PLAY" Switch S7 (forwardmost switch mounted on plastic AC IN board mounting bracket beside mechanism function gear).

### Caution Note Should Read

**CAUTION:** There is a thrust plate (Item 102, Fig. 47) used in the turntable bearing. Be sure that it is in place before replacing turntable. Do not turn player upside down during servicing without turntable in place, it could result in possible loss of the thrust plate.

## Electrical Adjustments page 24

Order of adjustment Chroma level adjust and Vertical detail adjust—

The Vertical Detail Level Adjust (R3317) should be performed prior to performing the Chroma Level adjust (R3312), otherwise the chroma level adjust must be repeated.

## Waveforms page 36

Waveform 35 is presented upside down.

## Interconnect Wiring Diagram pages 39 & 40

Add capacitor C1 0.047 $\mu$ F across Function motor B3 top of page 40.

## Power Supply Schematic page 50

Delete Capacitor C2004, 4700 pf at 5V reference adjust control R2020.

## Schematic Component Value Changes and Deletions pages 42 thru 47

Page 42—C5304 change to 33 $\mu$ F 25V  
C5305 delete  
R5156 should be safety related

Page 45—C3117 change to 10 $\mu$ F 25V  
C3118 change to 10 $\mu$ F 25V  
C3121 change to 33 pf  
C3122 change to 10 $\mu$ F 25V

*Schematic Note upper right corner of page 44 Should read:*

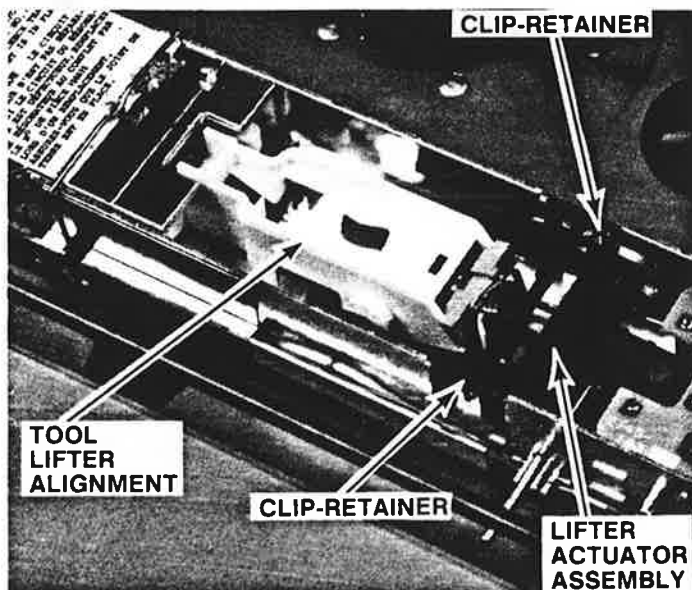
**NOTE:** Early (initial) production instruments did not use Q5908, Q5909, R5976 and R5977. Should a failure occur requiring replacement of transistor Q5901 (Forward Function Switch) or Q5903 (Reverse Function Switch), look for the presence or absence of Q5908 and Q5909. Then refer to the replacement parts list for correct stock number for Q5901 or Q5903.

## STYLUS LIFTER ALIGNMENT

If stylus lifter has been removed the use of a Lifter Alignment Gauge (see replacement parts list for Stock No.) is required when replacing it in the arm assembly.

The replacement and alignment procedure is as follows:

1. Reinstall Lifter Actuator Assembly - do not replace Lifter Pivot Clips at this time, see illustration.
2. Install Lifter Alignment Gauge (in same manner as installing Stylus Cartridge), see illustration.
3. Replace Lifter Pivot Clips (one on each side of arm assembly) and check to assure stylus lifter operates freely, see illustration.
4. Remove Lifter Alignment Gauge and install Stylus Cartridge.



Stylus Lifter Alignment

## REPLACEMENT PARTS

### BEFORE REPLACING PARTS, READ THE FOLLOWING:

**RCA-Approved Substitute Stock Numbers**—Before ordering stock numbers in this parts list, look for an RCA-approved substitute stock number in the current *RCA Distributor & Special Products Price Schedule*. This will minimize your service time and avoid ordering parts you already have in stock.

**See your RCA Distributor for Replacement Parts and Accessories.**

**Warranty Status of Assemblies and Parts**—The warranty status of some assemblies and parts are indicated by one of the following Warranty Status Codes:

- Complete assembly not eligible for warranty exchange or replacement.
- † Eligible for warranty exchange for new or rebuilt unit.
- ‡ Complete assembly eligible for warranty replacement with new or rebuilt unit.

All parts listed without a Warranty Status Code symbol are eligible for warranty replacement as discrete components.

Warranty replacement of cabinet parts requires prior approval of RCA.

Warranty Status and Specifications of assemblies and parts are subject to change without notice.

**PRODUCT SAFETY NOTE**—Components marked with a (★) have special characteristics important to safety. Before replacing any of these components, read carefully the **PRODUCT SAFETY NOTICE** in the Basic Service Data. Do not degrade the safety of the set through improper servicing. Although assemblies as a whole may not be marked with a (★), replacement of RCA assemblies with other assemblies not RCA approved may result in a safety hazard.

**Canada Stock Numbers:**  
Add prefix 62 to all stock numbers.

### .....AVOID REPLACEMENT PART ERRORS.....

**File supplements and addendums immediately upon receipt, and consult the parts lists in them before ordering parts.**

**NOTE:** For complete coverage of all parts and assemblies used in instruments equipped with the chassis series to which this service data relates, consult the following publications.

● **Basic Service Data**—Chassis and tuning systems and most related parts and assemblies that do not differ from one model or model group to another.

● **Service Data Supplements**—Cabinet, auxiliary, and other parts and assemblies that differ from one model group to another.

● **Service Data Addendum**—Any parts additions, deletions, or other changes made after initial production.  
**Do not replace or order parts without first consulting any Addendum(s) that may have been issued since publication of this service data.**

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
------------	-----------	-------------	-------------

#### UNDER:

#### ELECTRICAL COMPONENTS

#### DELETE:

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
C2004	143967	2841254-81M	CAPCD 4700PF M Z5P 50V
C3506	157201	2841253-23A	CAPCD 270PF J NPO 50V
C3507	157202	2841262-020	CAPCD 300PF J NPO 50V
C3509	157202	2841262-020	CAPCD 300PF J NPO 50V
C5131	147971	2841255-31M	CAPCD .01UF M Z5P 50V SJT300
C5306	143878	2841253-62M	CAPCD 560PF K Z5P 50V
L3503	157192	2873326-011	COIL 0.52UH
L3504	157192	2873326-011	COIL 0.52UH
R3514	157993	2815583-690	RES CF 1/8W 2% 510R
R3516	157993	2815583-690	RES CF 1/8W 2% 510R

#### NOW READS:

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
Q5305	140129	1417327-004	TRANSISTOR KICK PULSE OUTPUT
Q5306	140130	1417328-003	TRANSISTOR KICK PULSE OUTPUT
Q5901	140129	1417327-004	TRANSISTOR REV FUNCTION SW (LATE PRODUCTION)
Q5903	140129	1417327-004	TRANSISTOR FWD FUNCTION SW (LATE PRODUCTION)
Q5921	140130	1417328-003	TRANSISTOR CURRENT SOURCE SW
Q5923	140129	1417327-004	TRANSISTOR TURNTABLE MOTOR DRIVER B
Q5931	140130	1417328-003	TRANSISTOR CURRENT SOURCE SW
Q5933	140129	1417327-004	TRANSISTOR TURNTABLE MOTOR DRIVER A
Q5941	140130	1417328-003	TRANSISTOR CURRENT SOURCE SWITCH
Q5943	140129	1417327-004	TRANSISTOR TURNTABLE MOTOR DRIVER B
Q5951	140130	1417328-003	TRANSISTOR CURRENT SOURCE SW
Q5953	140129	1417327-004	TRANSISTOR TURNTABLE MOTOR DRIVER C

#### CHANGE TO READ:

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
Q5305	159299	1417327-004	TRANSISTOR KICK PULSE OUTPUT
Q5306	159300	1417328-003	TRANSISTOR KICK PULSE OUTPUT
Q5901	159299	1417327-004	TRANSISTOR REV FUNCTION SW (LATE PRODUCTION)
Q5903	159299	1417327-004	TRANSISTOR FWD FUNCTION SW (LATE PRODUCTION)
Q5921	159300	1417328-003	TRANSISTOR CURRENT SOURCE SW
Q5923	159299	1417327-004	TRANSISTOR TURNTABLE MOTOR DRIVER B
Q5931	159300	1417328-003	TRANSISTOR CURRENT SOURCE SW
Q5933	159299	1417327-004	TRANSISTOR TURNTABLE MOTOR DRIVER A
Q5941	159300	1417328-003	TRANSISTOR CURRENT SOURCE SWITCH
Q5943	159299	1417327-004	TRANSISTOR TURNTABLE MOTOR DRIVER B
Q5951	159300	1417328-003	TRANSISTOR CURRENT SOURCE SW
Q5953	159299	1417327-004	TRANSISTOR TURNTABLE MOTOR DRIVER C

#### NOW READS:

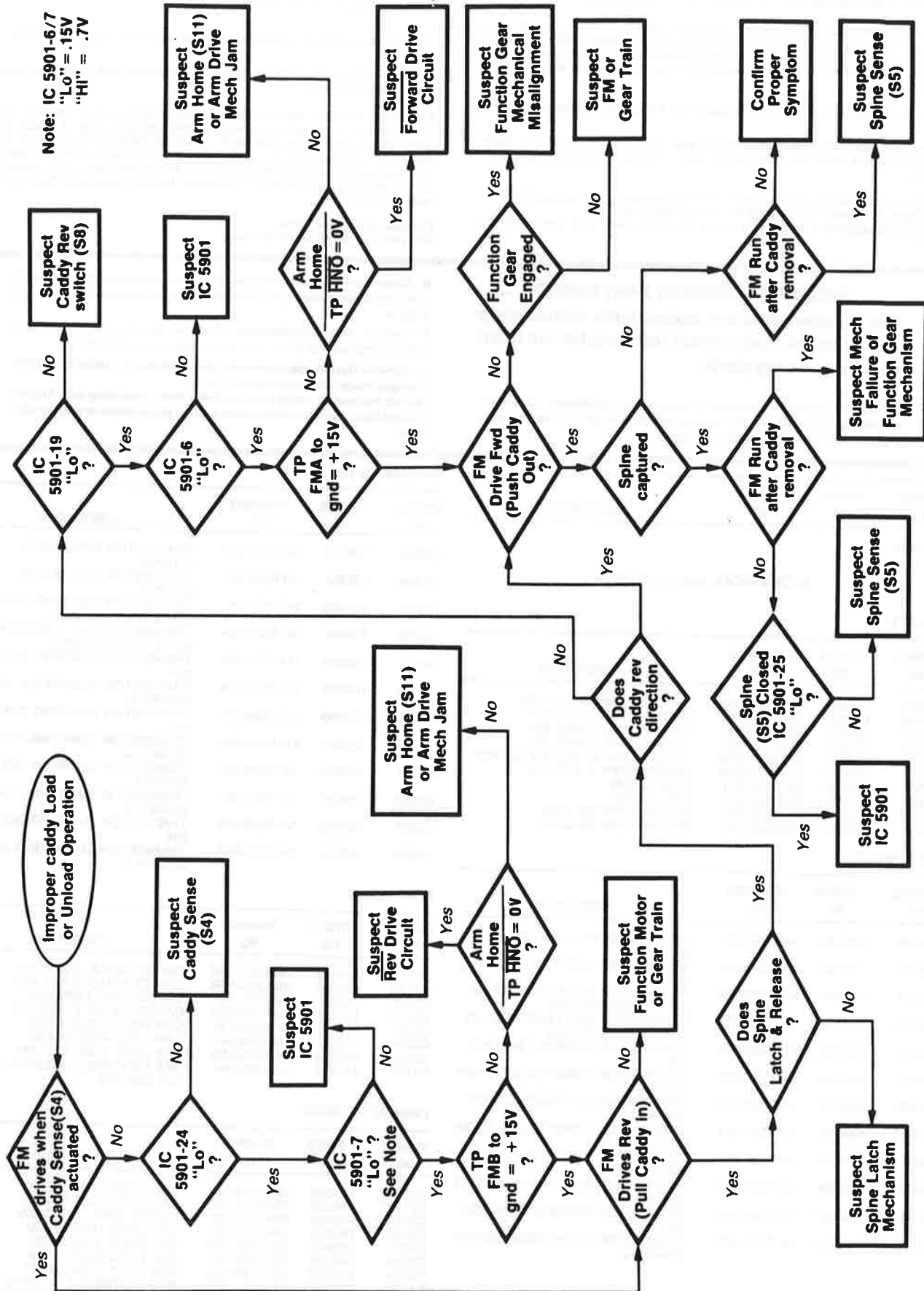
SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
C3117	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C3118	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C3121	143864	2841251-33A	CAPCD 10PF J NPO 50V
C3122	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C5301	153925	2872860-125	CAP POLY 0.1UF K 50V
C5304	143550	2841274-543	CAP LYTC 47UF M Z5U
R2024	145384	993273-325	★ RES CFFP 1/2W 5% 1.0R
R4127	151371	1479265-049	RES CONTROL L-R LEVEL ADJ. SJT 200/300

#### CHANGE TO READ:

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
C3117	146256	2841274-143	CAP LYTC 10UF M Z5V
C3118	146256	2841274-143	CAP LYTC 10UF M Z5V
C3121	146833	2841251-93H	CAPCD 33PF J N750 50V
C3122	146256	2841274-143	CAP LYTC 10UF M Z5V
C5301	159640	2872860-225	CAP POLY 0.1UF J 50V
C5304	149204	2841274-442	CAP LYTC 33UF N 25V
R2024	830A10	2817720-325	RES CFFP 1/2W 5% 1R
R4128	151371	1479265-049	RES CONTROL L-R LEVEL ADJ. SJT 200/300

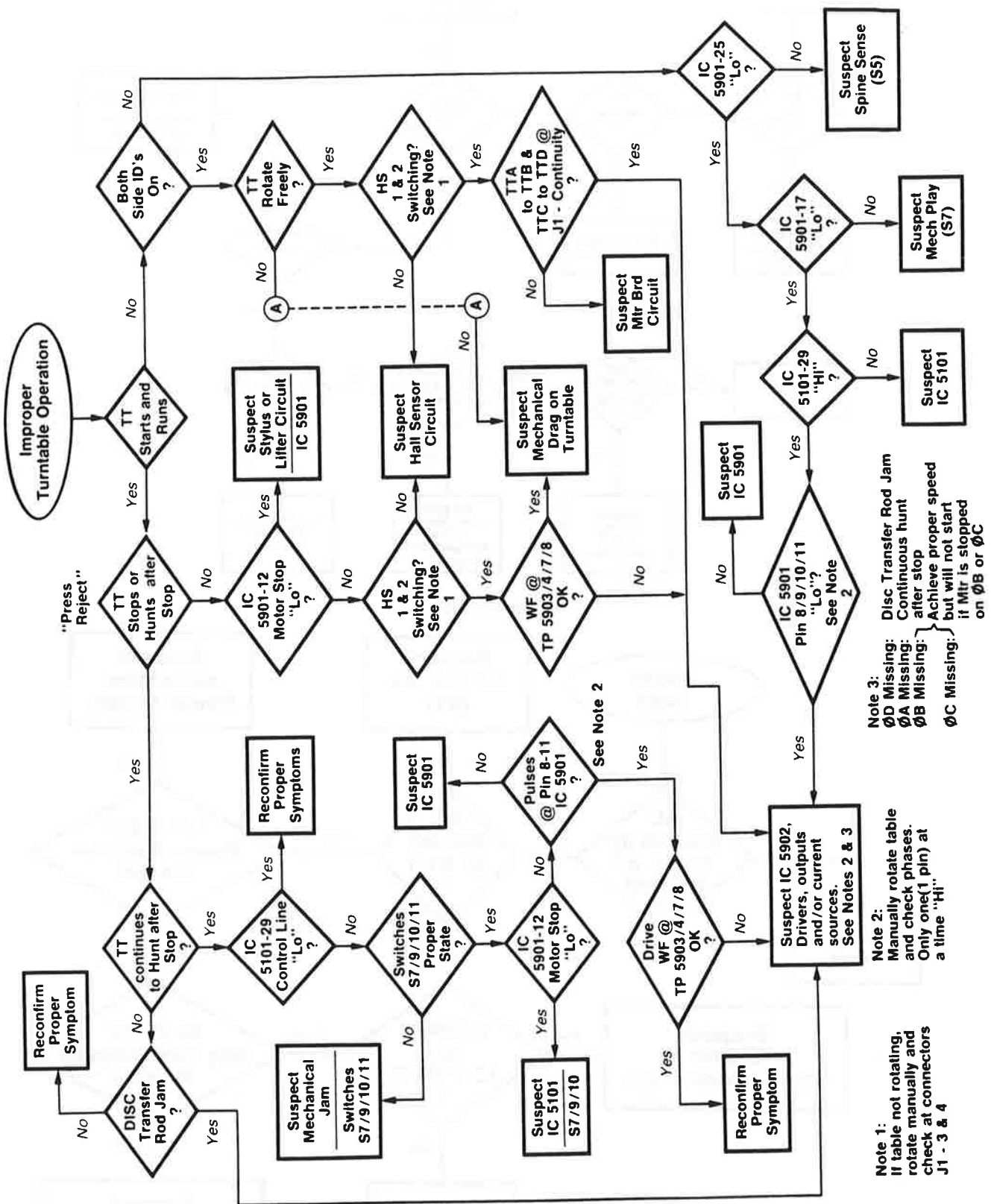


## TROUBLESHOOTING GUIDE



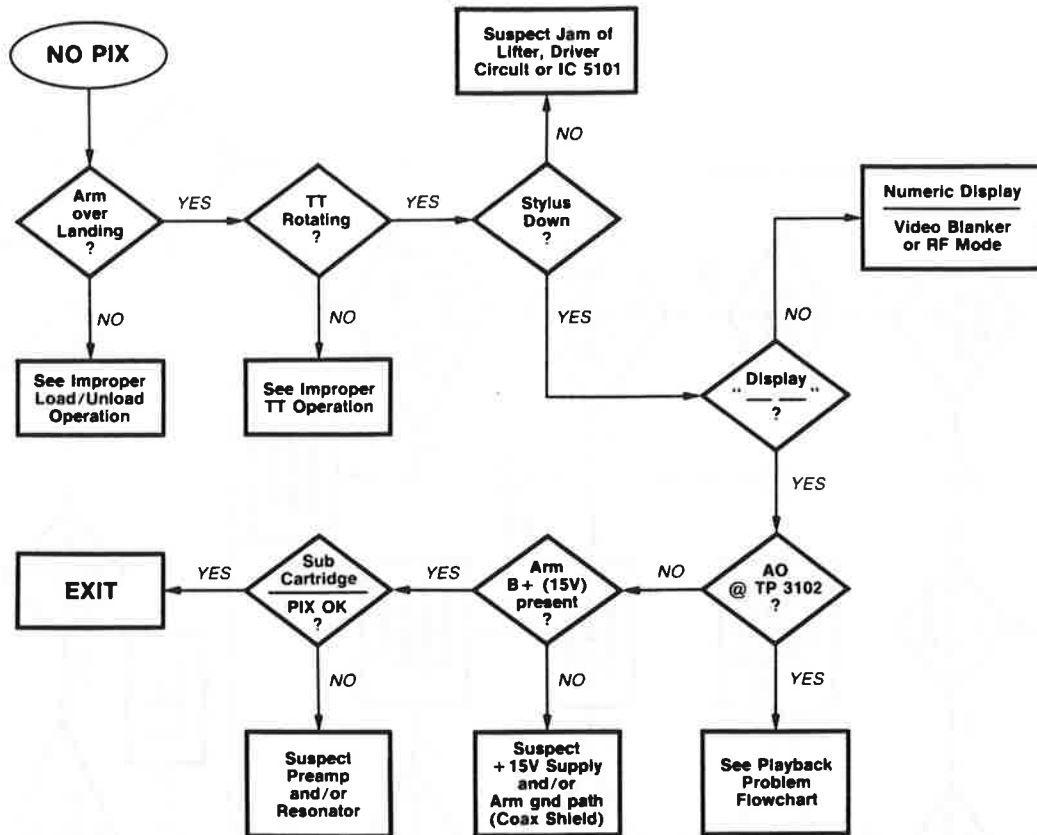
### ***Improper Caddy Load or Unload Operation***

## TROUBLESHOOTING GUIDE

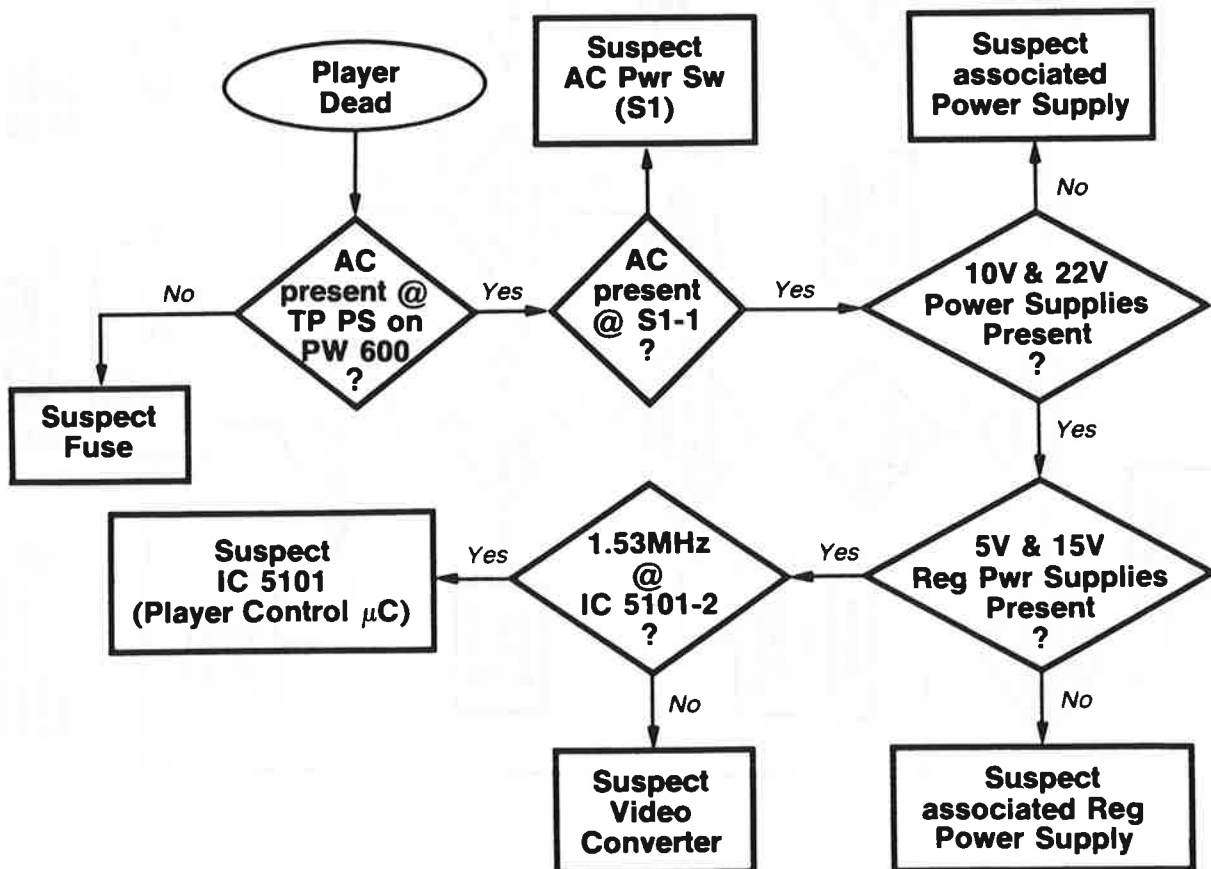


Improper Turntable Operation

## TROUBLESHOOTING GUIDE



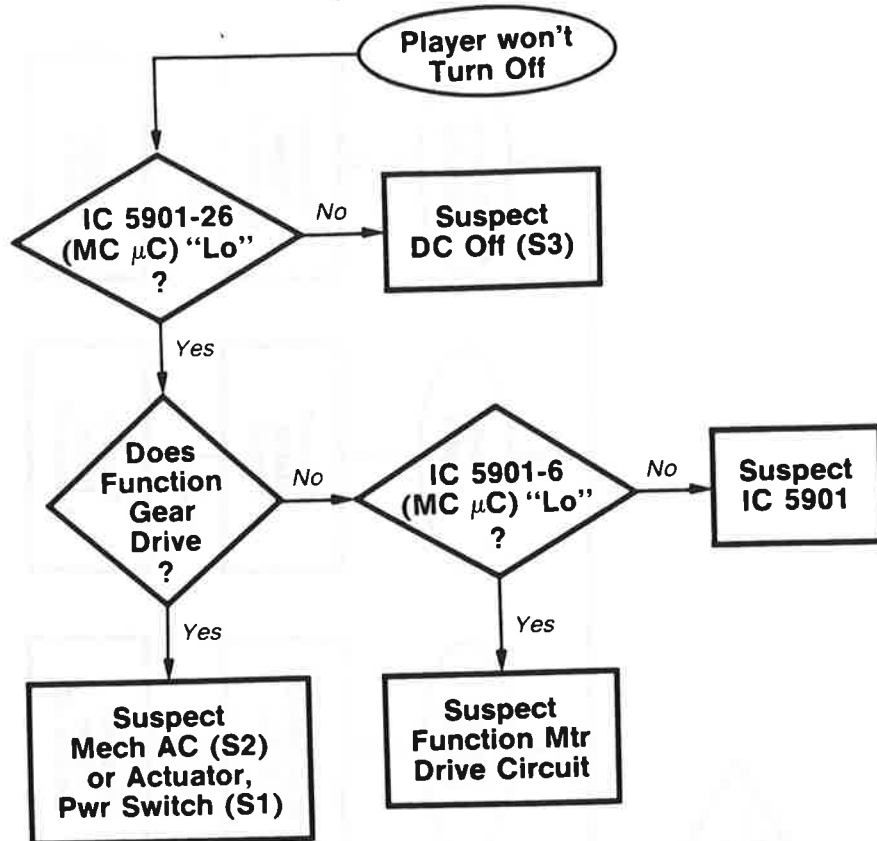
## No Picture



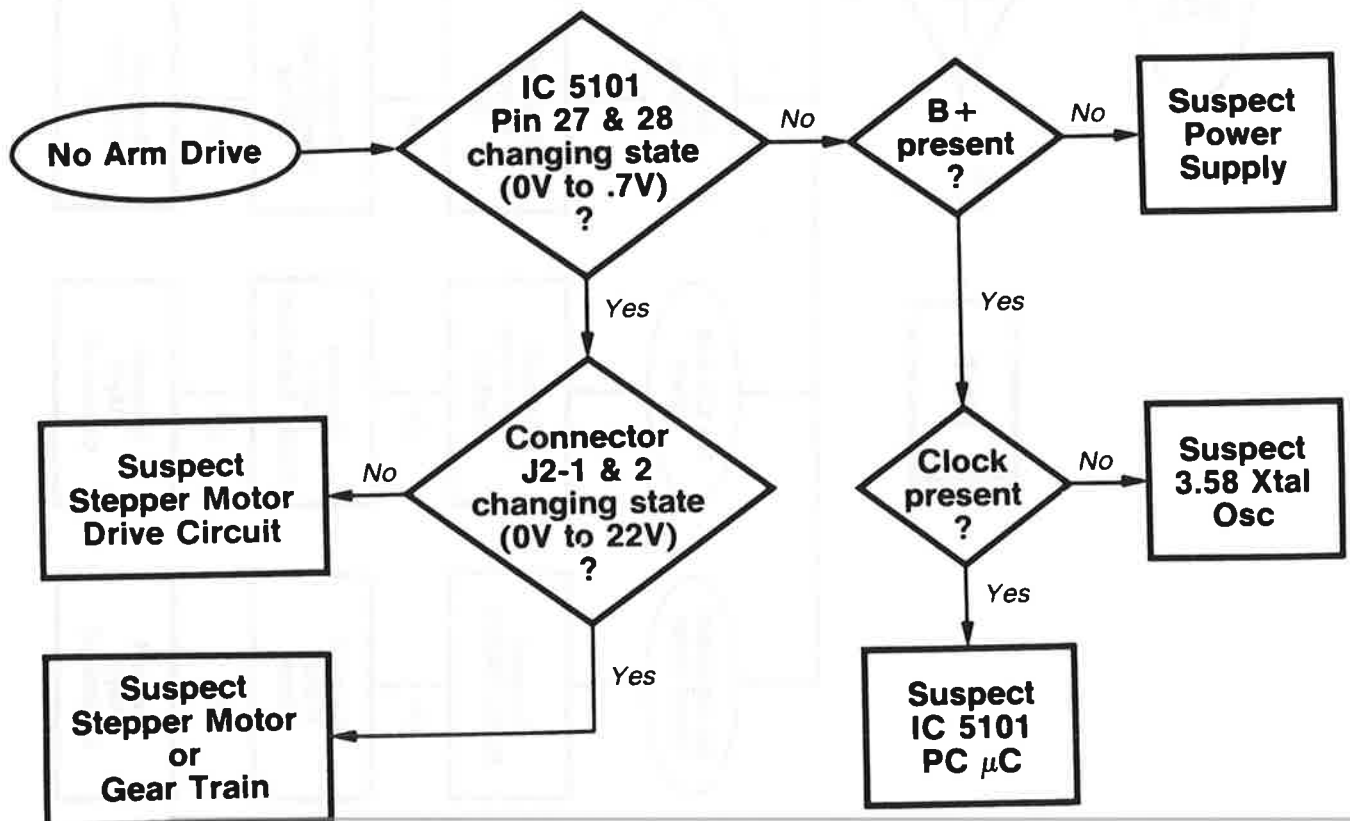
## Player Dead



## TROUBLESHOOTING GUIDE

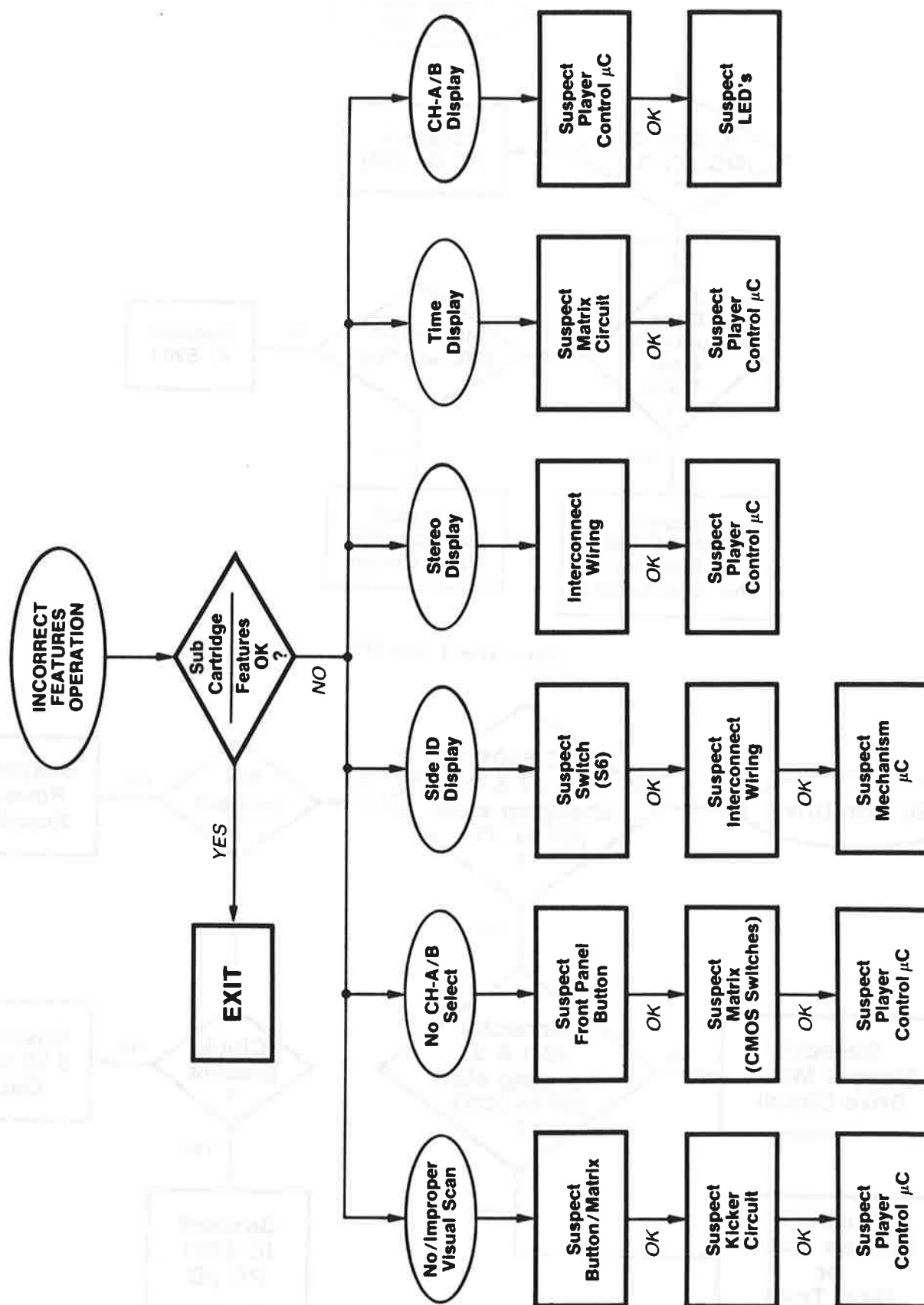


Player Won't Turn Off



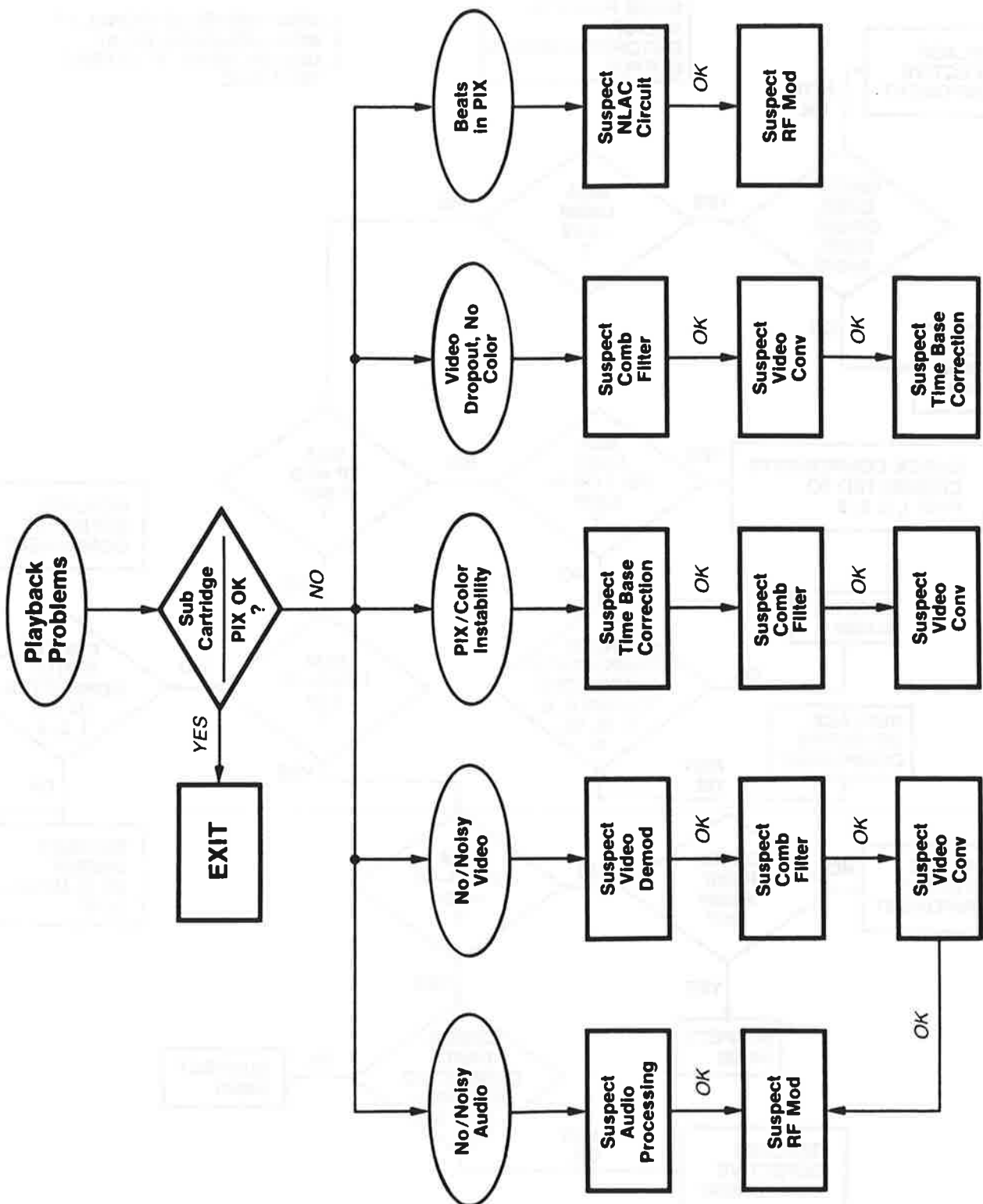
No Arm Drive

## TROUBLESHOOTING GUIDE



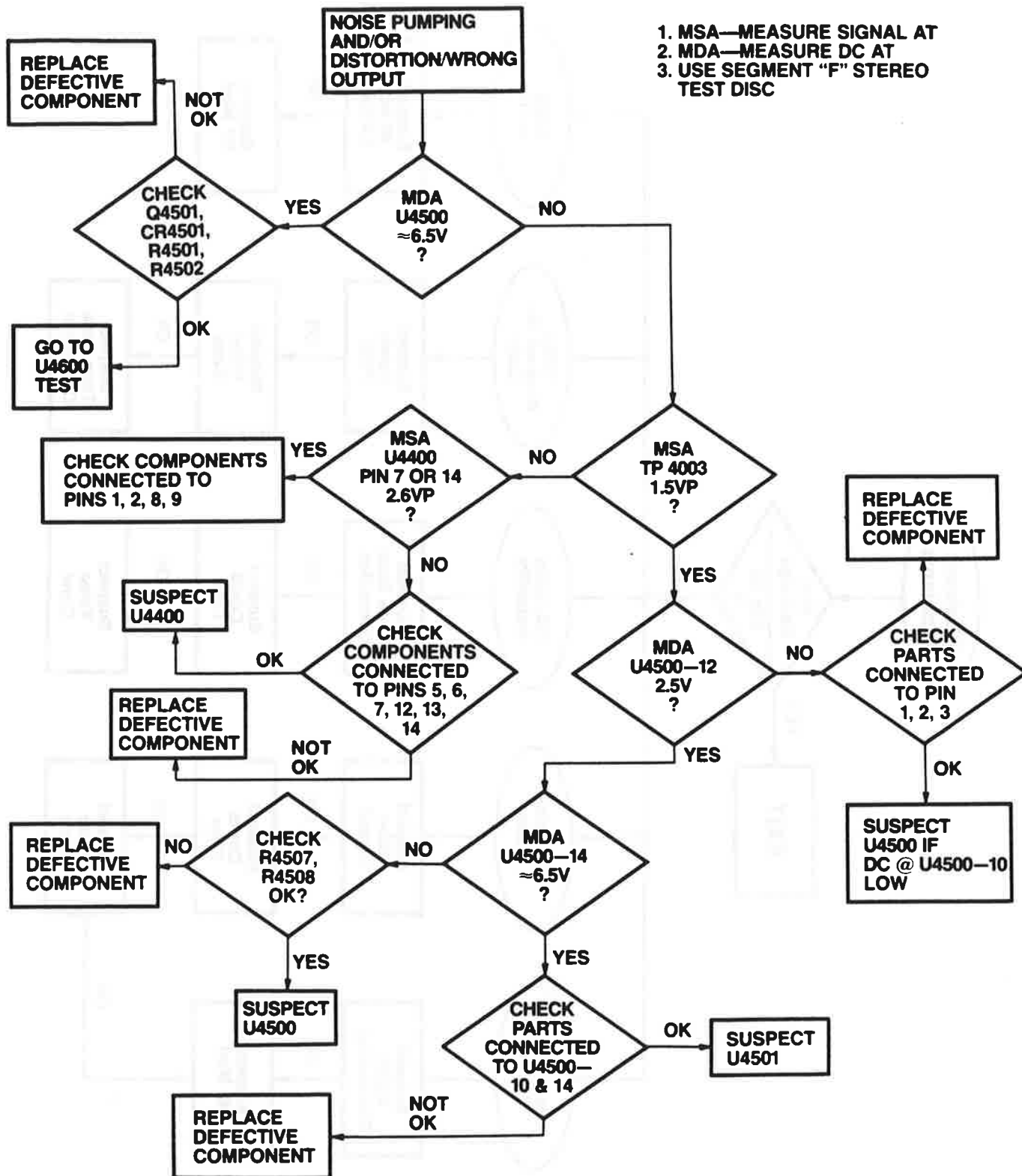
Incorrect Feature Operation

## TROUBLESHOOTING GUIDE



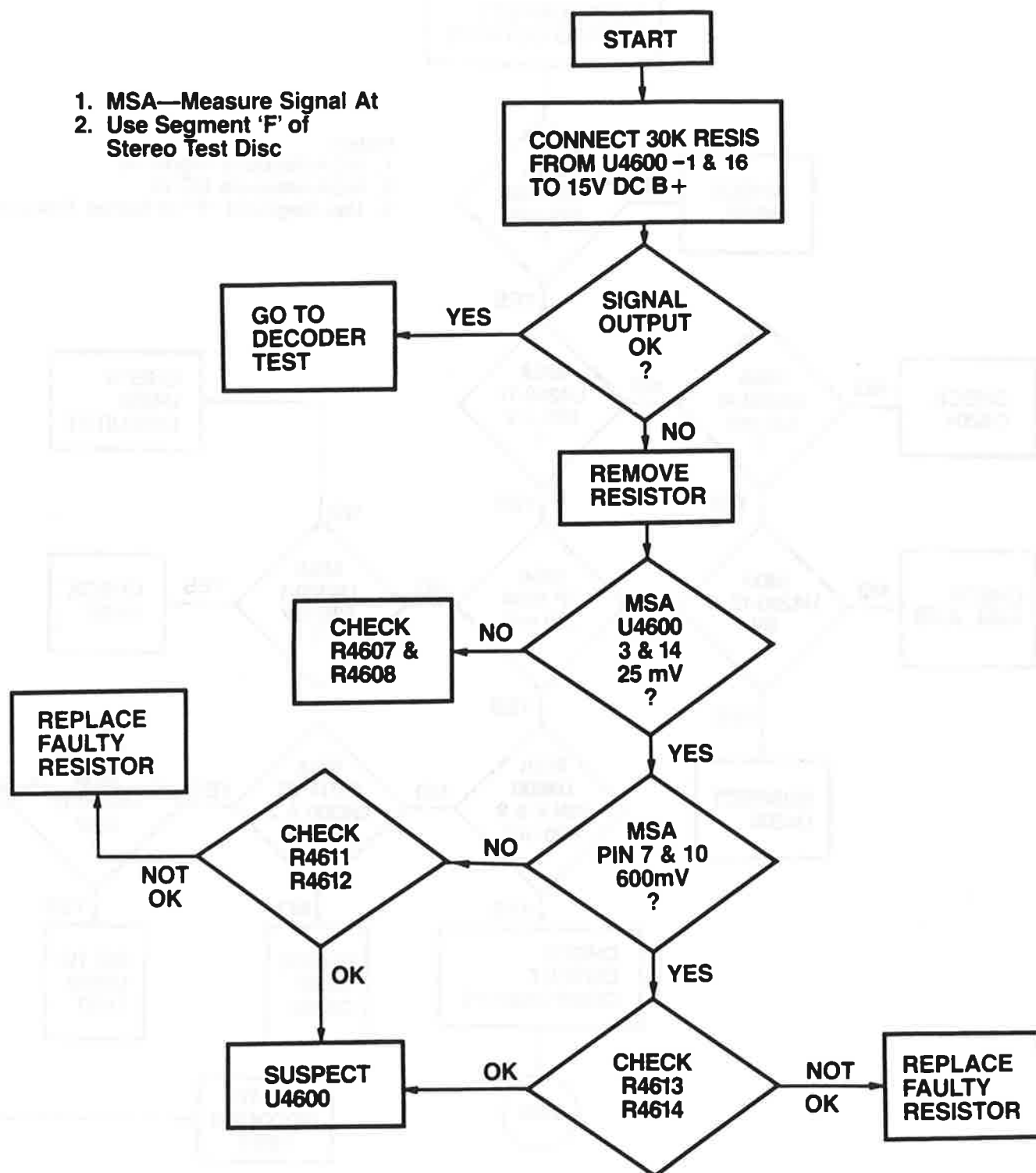


## TROUBLESHOOTING GUIDE



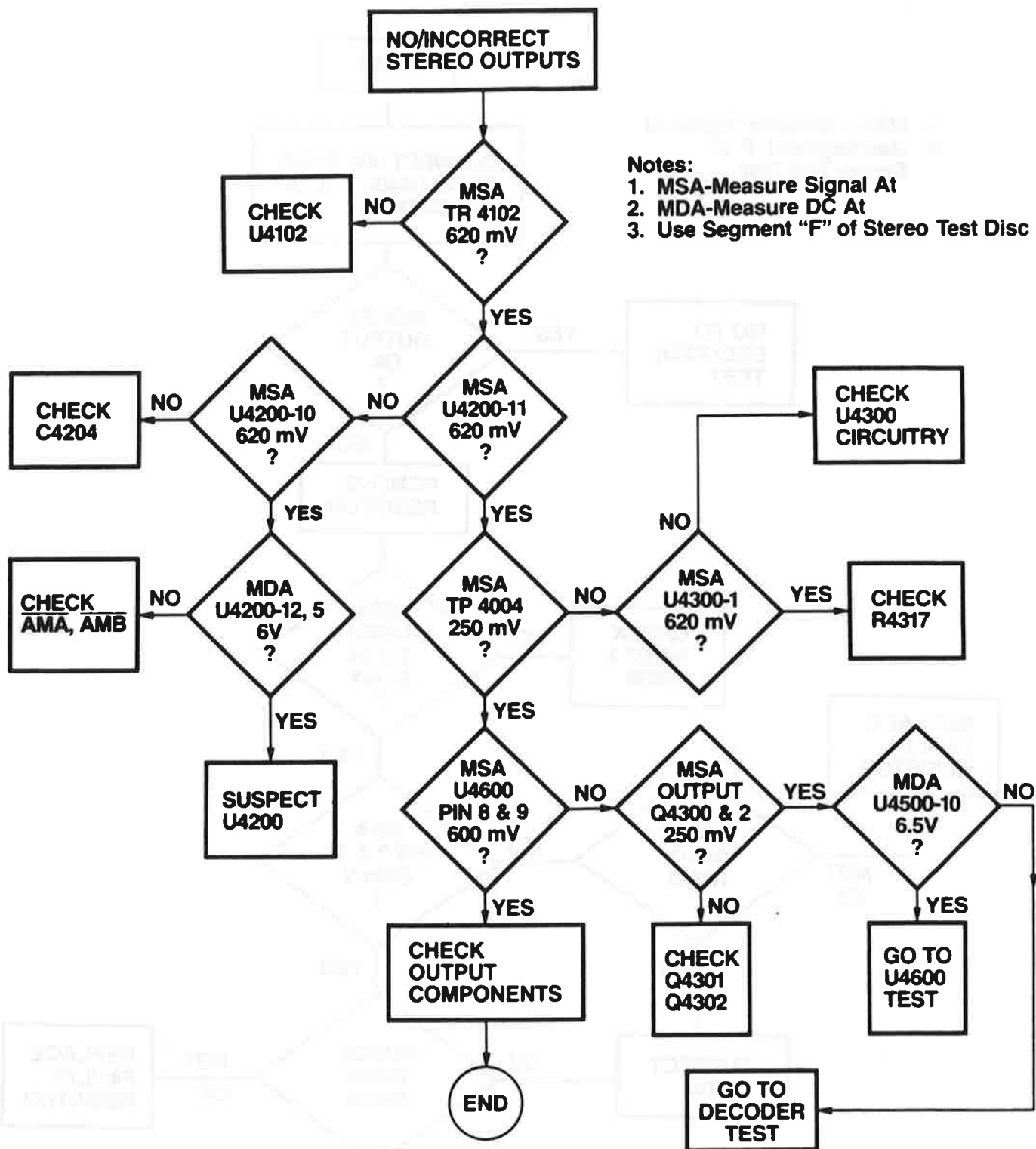
## TROUBLESHOOTING GUIDE

1. MSA—Measure Signal At
2. Use Segment 'F' of Stereo Test Disc



No/Incorrect Stereo Output

## TROUBLESHOOTING GUIDE



No/Incorrect Stereo Outputs





FILE  
1983  
SJT 100/200/300  
Addendum—2

# SelectaVision® VideoDisc System CED Addendum Service Data

Model SJT 090/  
100/101/200/300

## RCA Corporation Consumer Electronics

Technical Publications  
P.O. Box 1976 | Indianapolis, Indiana 46206

## RCA Inc.

Technical Publications  
5575 Royalmount Avenue | Town of Mount-Royal | Quebec, Canada H4P 1J8

Canada Stock Numbers:  
Add prefix 62 to all stock numbers.

**Purpose of This Addendum:** Update Basic Service Data to cover latest Replacement Parts List changes.

**Filing Instructions:** File this addendum immediately in front of 1983 SJT 100/200/300 Basic Service Data Addendum—1.

### SUMMARY OF ADDITIONS/CHANGES COVERED BY THIS ADDENDUM

Original Service Data Contents	Page(s)	Additions/Changes In This Addendum	Page(s)
Schematic .....	43	Item Number Change .....	1
Replacement Parts .....	Basic Data 64 thru 77 Addendum—1 .....	Replacement Parts List Changes/Additions .....	2

**NOTE:** Schematic on page 43 of Basic Service Data incorrectly shows Daxi Buffer IC as U5012—Should read U5102.

This is an Addendum Service Data. It covers model-related information and any exceptions to the Basic and/or Supplement Service Data ..... 1983 SJT 100/200/300

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SJT 100/200/300 Series

**BEFORE REPLACING PARTS, READ THE FOLLOWING:**

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**Canada Stock Numbers:**

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**.....AVOID REPLACEMENT PART ERRORS.....**

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**NOTE:** For complete coverage of all parts and assemblies used in instruments equipped with the chassis series to which this service data relates, consult the following publications:

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**Do not replace or order parts without first consulting any Addendum(s) that may have been issued since publication of this service data.**

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
---------------	--------------	----------------	-------------

**UNDER:****ELECTRICAL COMPONENTS****CHANGE  
TO READ:**

C5304	143550	2841274-543	CAP LYTIC 47μF M 25V
Q5901	160694	1417327-6	TRANSISTOR REV FUNCTION SWITCH (LATE PRODUCTION)
R5917	161710	2818520-48	RES FUSE 1/2W 5% 22R
J4602	157181	2816401-503	JACK AUDIO W/BACKET SJT 200/300

**ADD:**

FL4101	160168	2861062-001	FILTER
FL4102	160169	2861062-002	FILTER
FL4103	160170	2861062-003	FILTER
FL4104	160171	2861062-004	FILTER SJT 200/300
FL4105	160172	2861062-005	FILTER SJT 200/300
FL4106	160173	2861062-006	FILTER SJT 200/300

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
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P14	158679	2861623-008	CONNECTOR 8 PIN SJT 100
P14	158674	2861623-009	CONNECTOR 9 PIN SJT 200/300
R5308	160542	2815583-747	RES CF 1/8W 2% 120K

**UNDER:****MECHANICAL ASSEMBLY****CHANGE  
TO READ:**

7	159645	2861019-003	BUTTON, POWER
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